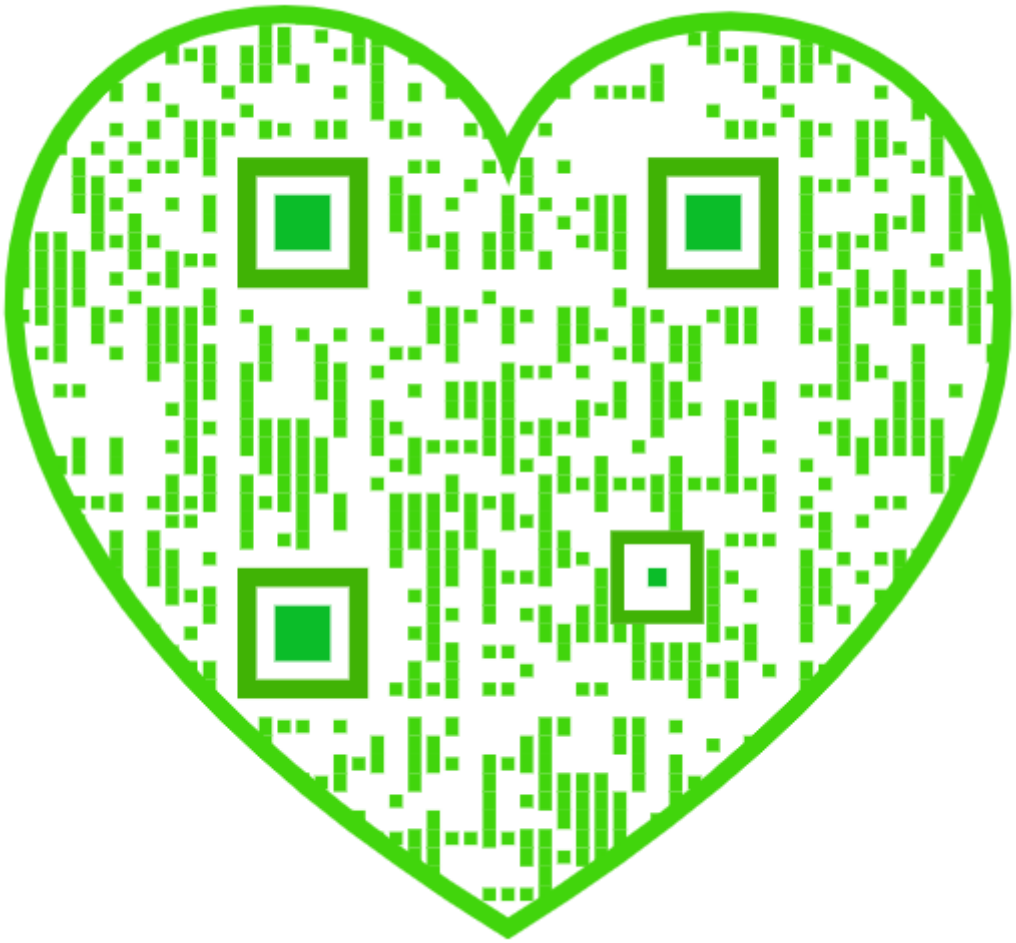
The Making of a Man

Rev. J. W. Lee, D.D.



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BY

REV. J. W. LEE, D. D.

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INTRODUCTION.

"My God, I heard this day
That none doth build a stately habitation
But he that means to dwell therein.
What house more stately hath there been,
Or can be, than is Man? to whose creation
All things are in decay.

"Man is all symmetry
Full of proportions, one limb to another,
And all to all the world besides;
Each part may call the farthest brother,
For head with foot hath private amity,
And both with moons and tides.

"For us the winds do blow,
The earth doth rest, heaven move, and fountains flow:
Nothing we see but means our good
As our delight or as our treasure,
The whole is either our cupboard of food,
Or cabinet of pleasure.

"Since then, my God, thou hast
So brave a palace built. Oh, dwell in it,
That it may dwell with thee at last!
Till then afford us so much wit
That as the world serves us, we may serve thee
And both thy servants be."

NATURE AND MAN.

THE meaning of creation is not understood till dust stands erect in a living man. That a great purpose was present from the beginning, directing and controlling, there can be no doubt. It presided over the first nebulous mist that floated out to take form in the foundations of the earth. It measured and weighed the matter and force necessary to form the globe. It determined the elements required to do the work lying through the years before it. It assigned to them their laws, specific gravities and affinities, and appointed, beforehand, the combinations and collocations they were capable of making.

But not till the atoms throbbed in a

human brain and beat in a human heart, did the purpose, which had through the ages run, stand out, defined and justified. Then it was that the intention underneath the drift of the ages spelled itself out in the unity of thought, the freedom of choice, and the capacity for love, potential in the intellect, will, and heart of the first man. He was the realization of an ideal, which gave meaning to the long periods of preparation. As the final expression of the creative process, he was at once the interpreter and the interpretation of all that had gone before.

I.

Writers of a certain school have sought to minify man's place in nature. They say, as Dr. Joseph Leconte well declares, that he is very closely connected with, and forms a most insignificant part of, nature—that he

has no kingdom of his own, but belongs to the animal kingdom; that in the animal kingdom he has no department of his own, but belongs to the department of the vertebrates —along with birds, reptiles, and fishes; that in the department of the vertebrates he has no privileged class of his own, but belongs to the class of the mammals, along with four-footed beasts; that in the class of mammals he has no titled order of his own, but belongs to the order of primates, along with monkeys and baboons. His conscience is but the resultant of fear and instinct, slowly deposited through the years of his evolution. Its imperiousness is self-constituted. Its scepter it has usurped, and, from the exhalations of its own rising cowardice, it has woven the purple robes which constitute the badge of its authority. His morality consists of rules imposed by his own prudence, and which have no sanctions beyond the opinions of his class or tribe.

His religion is determined by the physical conditions which surround his life—his geographical situation, the nature and configuration of his soil, his climate, and his food. Thus man is simply a natural product, while the civilization which he has produced is as much determined by the physical conditions surrounding his life, as the leaves and dates of the palm are determined by the physical conditions surrounding that tropical tree. The hopes and the trials, the courage and the sacrifice of the best men, as well as the ambitions and motives of the worst, are put on a level with the damps and winds. The one class is entitled to no more credit for what is noble and heroic, than is rain for nourishing the crops; while the other deserves no more rebuke for what is base and ignoble, than the lightning for striking the Church and killing the people. The love which expresses itself in monuments to commem-

orate the deeds of the good and the great, and the condemnation which lifts itself into jails to confine the criminal and the outlaw, have, in the last analysis, the same meaning. There is no sacred significance or obligations rooted in divine sanctions, in either the monuments or the jails. Both are but fickle phases of the passing spirit.

The convictions of Moses, reproducing themselves in the government, laws, literature, morality, and religion of a great people, conserving them through the ages as examples of order and health, have no more meaning than the sap which rises in some monarch of the forest, to express itself in leaves and fruit. The conceptions of duty, which nerved the heart and inspired the courage of the Apostle Paul, leading him to plant churches in Asia Minor, to become the seeds of modern civilization, were as completely natural as the rising of the waters of some mountain spring, to flow

over silver sands to the sea. The music of Beethoven, the visions of Raphael, were but as the vapor in the light of the morning sun, beautiful, perhaps, as the rainbow, but going out with the setting day. Whatever of emotion or conscience they embodied, signified no more than the colors of the peach bloom, or the notes of the falling cascade. However esteemed the valor that risked life to break the reign of oppression and murder, it was but a varying form of the heartless ambition that sought in strength to make it prevail. The patriotism of Leonidas, giving up his life to save his country, and the insane act of Nero, swathing Christians in tar to light his feast, were forward and reverse movements of the same human spirit; both natural, and both as unmoral as the electricity that now strikes to destroy, and now burns the malaria to save. No difference is made between poison in the fangs of

snakes, and mercy in the hearts of men.

Back of nature there is no purpose, and in its manifold combinations and adaptations there is no design. It is only a vast aggregate of unresting atoms, striking one upon another, and without intention and without purpose, forming pairs, clusters, and groups, and thus assuming the shapes we see. Why there happens to be order instead of chaos hangs on the uncertain turn of luck.

II.

If there is mind in the universe, and if there is purpose in the order and movements of the earth, then man is the culmination of that purpose, and with reference to him was the order constituted and the movements determined. If there is naught but matter and force, and these exist without any directing or co-ordinating mind,

then all things are without intention and without reason. There is nothing good or bad. Nothing is right or wrong. All things are reduced to a meaningless level of indifference. But matter and force bear witness to mind. Matter is here we know; and matter has not only form, extension, impenetrability, for its qualities, but indestructibility. Take the matter that enters into the composition of the earth. The amount of it is fixed and definite. It may be expressed in pounds weight. Since the beginning, not an atom has been added to it, or taken from it. Its presence here is to be accounted for. It either determined its own existence, and the exact amount, in pounds weight of that existence, or it was determined by some principle or power outside of itself, or within itself, called mind. If it determined itself to be, then it is intelligent, for self-determination and self-action are the essential character-

istics of mind. Then intelligence is retained by being transferred from something called mind to something called matter. But it has never been claimed that matter is intelligent. Then it is not self-active or self-determining, and waits on mind for its existence and its movements.

Matter as plainly bears testimony of the existence of mind, as to the existence of itself. It is easier to believe that the earth has taken the globular form and the circular motion by the determinations of mind, than to believe that through its own determinations it has assumed a circumference of twenty-five thousand miles, and the regular task of wheeling on its axis every twenty-four hours.

Not only is it impossible to account for the exact amount of matter making up the earth's size and weight, without assuming the power of a co-ordinating, determining mind; but a still greater task is upon us,

to account for the sixty odd original elements, out of which all things in nature are formed without mind. These elements differ in quantity, quality, specific gravity, and affinity. What determined their number, their tendencies, and affinities? Why something more than sixty; no more, no less? Why so much of some, so little of others? We must either conclude that they determined themselves —that they held a convention before they existed, and resolved upon taking form and motion, or else we must believe that they were determined by some power, other than themselves—by mind. If by their own motion, oxygen, and iron, and gold are what they are; then the elements have the power of self-action and self-determination, and are therefore intelligent.

The collocations these elements form are more difficult still to be accounted for

without the agency of mind. Figures piled up to the sun are not able to express the possible combinations they are capable of assuming. The possible combinations of even twenty-four letters of the alphabet could not be expressed in literature, filling the world with books. Much greater must be the number of combinations of the original elements—the alphabet of creation. It is to be remembered, too, that they disagree on more of their sides than they agree. They are by no means equally congenial. Friendships and unions between them are formed in accordance with the most exact rule and affinity. Does it not seem, then, that combinations formed by chance would be mutually incompatible, neutralizing, and destructive? Would they not forever ferment in ungoverned chaos? Yet we see them dwelling together in the utmost unity, like seeking like, and in the bonds of law and

harmony, uniting in compound, mineral, vegetable, animal, and the body of man himself.

Were there as many of the letter *a*, as there are atoms of oxygen; and as many of the letter *b*, as there are atoms of hydrogen; and were the letters of the alphabet to be increased in proportion to their use, until they should equal the atoms of all the elements which enter into the composition of the globe; how long would it take these letters, stirred by some force like the winds, to assume the form of such a poem as Paradise Lost? We cannot believe that all these letters, stirred by an unseen force through infinite ages, would ever form a sensible verse of poetry, or a rational verse of prose. It is as difficult to understand how the letters of the alphabet could ever get into the rhythm of Paradise Lost, without Milton's mind, as to understand how unconscious elements took the form of

mountain, sea, grove, and globe; round, articulate, and law abiding, without a great co-ordinating mind.

The physical forces and energies bear indubitable testimony to the existence of mind, not only outside of themselves, but in themselves and through themselves. We have the force of gravitation, the power which bodies have of attracting one another in proportion to their mass, and inversely as the squares of their distance; in other words, that power which bodies have of setting up mutually aggregative motion, unless prevented by some other power of an opposite nature. A body suspended in the air is attracted toward the earth by the force of gravitation. A lump of sugar held over a cup of tea, attracts into itself the water of the tea cup. This is done by the force known as capillarity. A piece of iron left exposed attracts the particles of oxygen in the

atmosphere. This is done by the force known as chemical affinity. Why do bodies attract one another in proportion to their mass and inversely as the squares of their distance? Why does a lump of sugar, held close over a cup of water, attract the particles of water into itself? Why does a piece of iron in the atmosphere attract to itself the oxygen? We are told it is because of gravitation, capillarity, and chemical affinity. How happens it that these forces have methods of action known as gravitation, capillarity, and chemical affinity? They either determined themselves to have them and to act in accordance with them, or else some power other than themselves determined these methods of action for them.

The truth is, gravitation, capillarity, and chemical affinity are but terms we use to define the operations of mind. To name a force and to find the formula in accordance

with which it works, is not to determine the origin of its source. And because we have, by observation and experiment, found out the methods and the measures of the mind's working, is no good reason why we should read mind out of the process altogether. This is to mistake names for causes; and to suppose when one learns how a force acts, that he has also learned what it is that acts.

A contemporary of Shakspere might have observed the poet so closely in his home at Stratford-upon-Avon, as to be able to give to the world a detailed and exact account of his habits of thought and hours of study; but this would not have kept the intelligent part of mankind from believing that a great mind had embodied itself in the immortal plays of Shakspere.

Heat, electricity, light, and magnetism must also be expressions of mind, for the

same reason that matter is an expression of mind. To believe them self-determined, is to believe them rational and intelligent. This has never been claimed, hence our only way of accounting for their existence is to regard them as the determinations of mind. We see them, day by day, lending themselves to the uses and devices of man's thought, and expressions of thought they must be.

III.

This whole subject resolves itself into the question, Which is fundamental and prior, mind or matter? If mind is fundamental and prior, then there is design, intention, and purpose in nature. If matter is first and fundamental, there is no such thing as design, intention, or purpose anywhere. If mind is first and fundamental, then man is the end and aim of creation, for in him the

mind that formed the earth finds a companion and an interpreter. If matter is first and fundamental, then the earth is as much for crocodiles and wolves, as for men, and the life of a human being is no better than that of a lizard. If matter is fundamental, it were better to be a crocodile or an elephant than to be a man, for they have more of the fundamental stuff of the universe in their bodies; and their brains generate none of that subtle something called *mind*, which perpetually asks questions that have no answer, and cherishes beliefs that have no foundation. If matter is fundamental, then we should trust our faculties, in proportion as they are animal, and deny them in proportion as they are mental. Then the Neros and the Caligulas were more rational in their sins, than the Luthers and the Wesleys in their virtues. By following their lusts, the former found pleasure, of a low order of course, but in

the realm of the real; the latter, following their convictions, found pleasure, of a higher order it may be, but it was in a false and unreal domain. It were better to be true to the facts on the plain of the appetites, than to be the silly victims of fraud on the plain of the conscience and the affections. But it is impossible that men have been true as they have been degraded, and false as they have been pure. The design and purpose which has been apparent in nature, and which men have felt in conscience approving the right and condemning the wrong, must be there. To eliminate them, or to reason them away, is to bring mental confusion, and to take from the conviction and thought, which have made civilization, the principles on which they reposed, and by which they were inspired.

IV.

Man has no deeper and surer impression than that the world belongs to him and was made for him. It is deepened year by year, too, as he sees the relations he sustains to it increase. No more certainly are the walls, roof, and floor of a house related to the comfort and protection of the family, than are the elements, forces, and seasons of nature related to the well-being and civilization of man. Mountain and sky, meadow and forest, the past and the present are permeated with the thought, or idea, of man, whether in the first stages of progress, keeping beasts at bay with sling or stone, or at a more advanced period, tunneling the rivers and digging down the mountains. Young or old, child or man, nature stands ready to serve him. Water from her skies flows through his veins to and from his beating

heart. Trees and shrubs and herbs minister to his pleasure and his ills. Rocks, and timber, and steel lend themselves to his service for house, hatchet, or chisel. When he ascends sufficiently in the grade of civilization to give expression to his conceptions of beauty, he finds the colors in the ores under his feet to embody his visions. Would he illuminate his humble home at night, there is the pine with its light-giving tar. Does he live amid the plains, where the pine does not grow, there is the ox with his tallow ready to be made into candles. Does he live on the coast, away from the ox or the pine, there is the whale with his oil. Does he want a better light than pine, or tallow, or oil can give, there are the coal beds, with their sunshine laid up for his use for thousands of ages. Does he wish to turn night into day, and make his streets glow with the radiance of the stars, there is electricity to be drawn from

its wide, mysterious fields, to serve his growing desire. Would he cross the sea, the winds lie ready to fill his canvas and draw him from continent to continent. Are the winds too slow, there is the heat, stored in the mountains, ready to move his engine and drive his wheel. Does he wish to make himself ubiquitous, and send a message across the sea, before a ship could get out of port, there waits on him again the mysterious lightning.

Nature teems with elements and forces to wait on man's every thought, to gratify his every desire, and to respond to his every aspiration. With all her wealth she surrounds him, and in ten thousand ways invites him to use it. The naturalist Guyot said the hand of man prefigures his destiny as an intelligent worker. So the form of all continents and islands, the outlines of all seas and coasts, contain the idea of the human family. At a time,

geologically about the same, the surface conditions of the earth were prepared for the advent of man. The great Himalaya Mountain range was lifted up to prepare an embosoming plain to serve as a cradle for the human race. The long chain of mountains running through the whole length of the North and South American continents was raised to prepare the way for civilization on this side of the sea. When the ocean beds were dug out and the waters called off from a part of the earth's surface; when the mighty peaks and the majestic turrets of the mountain chains were lifted into the sky; when the encompassing atmosphere was filled with all life-replenishing elements and wrapped about all oceans and shores; when the poisonous forces destructive of man's life were locked up in soils and rocks; when the meadows were sown with grasses, and the hospitable arms of the trees were

loaded with fruit, then, upon the earth, adorned and ready for his coming, man appeared.

V.

Considered as an embodiment of thought, man is the only creature who can interpret Nature. The ideas and principles that fill his great books were gathered from a study of her secrets and processes. The first books on geology, giving the history of the earth, its upheavals, changes, and transformations, were written in the rocks, sands, coal-beds, and shells of the primal ages. The first books on chemistry were written in the shape, sizes, affinities, and specific gravities of the atoms which enter into the composition of all natural bodies. The first books on arithmetic, by the knowledge of which man learns to divide and conquer nature, were written in the qualitative relations and movements of

matter. The first books on astronomy were written in the orbits and movements of the heavenly bodies. The first books on zoölogy were written in the structure and habits of the lower animals. The books that fill our libraries are but transcripts from the original volumes written in rocks, seas, flowers, and skies. Man is the only being who can read and transcribe these wonderful volumes. They lie unopened and unknown till his interest is provoked. Their language carries no meaning till he comes to find it and to ponder it. The herds that low amid the Alpine echoes see, as well as the distinguished Tyndall, the great glaciers, as they press with slow and measured pace down the mountain side; but their meaning, and the law by which they move, is not known till the man of science comes. To him, they speak in awful and majestic terms. To the sheep in the meadow, the grass means

nothing but food; to man, however, every blade has a message, poetic and beautiful.

Considered as a home, this world was made for man; in a thousand senses, it was not made for any other creature. It is the home of the oyster, but its wants are met by a little basin in the sea. It is the home of the elephant, but a few acres of Asiatic jungle furnish the food and the conditions necessary to its life. It is the home of the bird, but give it a tree and a worm, and a small circle of sky to fly around, and it needs no more. But man needs it all. For his hunger, the foods and the fruits of its continents, oceans, and skies. For his thirst, the waters of its thousand rills. For his shelter and protection, all its woods. For his thought, all its order and law. For his ills, the tender ministry of all its minerals and plants. He is related to it all, and to be completely furnished must be able to use it all.

Considered as a place of discipline, the earth is for man, for he is the only creature helped and advanced by discipline. The beaver cuts his tree and builds his dam to-day just as the beaver did in the first year of his existence. He has had the discipline that comes through work, but it has not improved him nor elevated him. In order that the bee may live, he must gather his honey and build his cell. This is discipline. But he never improves. He never grows in culture or skill. The bee that built his cell in the trees of paradise, and gathered his honey from the flowers that grew in the garden of Eden, knew as well how to construct a cell according to mathematical principles, and to pack it with honey, as the Italian bee of the nineteenth century, who stores his honey in a painted gum prepared for him by man.

Monkeys in South America cross rivers by twisting their tails, thus making bridges

of themselves. This is discipline and exercise of a complex and marvelous sort, but they devise no new ways of building bridges. They do not increase in knowledge or skill by their work. That he may gain the means of subsistence, man is under the necessity of work too. But his work is to him a means of growth and knowledge. His work has helped him forward, and secured to him culture and skill. Suggestions come to him, as he fells the forest, as he plows the field, as he plants the seed, and as he rows his dug-out. These suggestions he turns to account. He builds them into better axes for cutting the trees, into better plow-stocks for breaking the land, and into better boats for crossing the sea.

By turning the suggestions he has received into better methods, into improved tools and machinery, he has come from the dug-out to the ocean steamer; from the pack-

mule to the palace car; from the scythe-blade to the mower and reaper; from the stone and sling to the improved army gun; from the spinning-wheel to the cotton-factory; and from the foaming steed of the flying messenger to the electric telegraph.

Because of the growth and improvement he has received through work, the tom-tom has long given place to the piano, and the tent to the modern home. Through struggle with nature, he has been piqued into a determination to conquer her, to ferret out her secrets, and master her processes.

The forces that oppose him he makes to serve him. The river current, which forbids him to cross, he utilizes to ferry him over. He sets his sail in the wind blowing eastward and avails himself of its power to carry him westward. The waves that rise to engulf him he turns into steam to outride them. The winds draw his water, the

river saws his plank. The tail of the beaver is adjusted by nature to the mud he needs to cement his dam; his tooth is already adjusted to the hardness of the tree, so that he cuts it down by instinct and without thought. The eagle finds the air already under his wings when he would fly, and his talons already prepared to hold his food, or to grasp a limb in the forest. The fish finds itself in the beginning of its existence in an element ready to respond to its fins, and in the presence of food adapted to its life. The lower animals find themselves at the start in a world immediately adjusted to their needs, so that they have only to use their feet, their teeth, their horns, their claws, their wings, and their fins, to conquer their enemies and find their food. The animal is wholly governed by natural law, and hence has no history. He moves on nature's level, and is adjusted to her plains, her forests, her seas, and her skies, without his

thought or his device. Man is not related in the same outward, immediate way to clothing, food, and fuel. His understanding, it is true, corresponds to the scheme of nature, but he must grow into this by study, by insight, by hints, by the use of faculties the lower animals do not possess. As long as he remains on the plain of the tiger and panther, and emulates their stealthy step to creep upon his prey, or his human foe, like them, he has no history.

The savage, perhaps, did master the mystery of the dug-out and the birch-bark canoe, but he had no place for his archives but a hole in the ground, and no experience but such as died with him. Man's history begins with the attempt to conquer Nature. The contribution that Nature makes to human civilization is that she sets herself against his inward energies, as if to call them out. She puts limitations about him, that he may be prompted to rise above

them. The fury and storm of the sea provokes his ingenuity to express itself in the steamship. The peril to life and fortune contained in the lightning's flash, begets the steel rod that disarms it. The distance between the wheat that grows in one part of the globe and the need for bread in another, leads to the discovery of a method of transportation that obliterates it. Civilization is the expression that man has made of himself in his attempts, through thought and will, to effect the conquest of Nature. This witnesses to the peculiar and magnificent place which alone belongs to him in nature.

It may be true that he has no kingdom of his own, no privileged class of his own, and no titled order of his own; but it can hardly be disputed that he has a history of his own. This history, written in the dim glories of vast empires, in the rush of splendid cities, in the age-long conflict between

good and evil, in the undying creed of martyred faith, in the hope, fidelity, trial, agony, triumph, and self-sacrifice of the human race, bears witness to the fact, either that the earth was made for man, or else that he is the only creature upon it capable of subduing it, transforming it, recreating it, and appropriating it. If man is only a natural product, the powers have certainly been engaged in a marvelously intelligent and complicated sort of conspiracy to advance his interests and to serve his dominion.

Nothing but what we have been accustomed to regard as design, intention, purpose, is sufficient to account for the fact, that the scheme of nature so completely corresponds to the understanding of man as to make it possible for him to command and claim all her possessions for his own.

Men will never accept such a happy coincidence as the work of chance. They

will, by the very structure of their minds, believe that the scheme and the understanding, which, through the process of struggle and trial, grows into it, were intended, by the Great Author of both, the one for the other.

BREAD.

"The power that Greece had to throw out light is marvelous, even now that we have the example of France. Greece did not colonize without civilizing—an example that more than one modern nation might follow : to buy and sell is not all.

"Tyre bought and sold : Berytus bought and sold: Sidon bought and sold : Sarepta bought and sold. Where are these cities ? Athens taught ; and she is to this hour one of the capitals of human thought.

"The grass is growing on the six steps of the tribune where spoke Demosthenes: the Ceramicus is a ravine, half-choked with the marble dust which was once the palace of Cecrops : the Odeon of Herod Atticus, at the foot of the Acropolis, is now but a ruin on which falls at certain hours the imperfect shadow of the Parthenon : the temple of Theseus belongs to the swallows : the goats browse on the Pnyx. Still the Greek spirit lives : still Greece is queen : still Greece is goddess. A counting house passes away : a school remains."

CHAPTER I.

THE PROVISION FOR THE PHYSICAL NATURE OF MAN.

In the form of bread, using the term in a wide generic sense, matter passes into the service of man on the plane of human life. By regular steps it is lifted and refined and adjusted to correspondence with human need and comfort. In its raw and individual state, it is controlled by physical force. From this crude condition it is carried by chemical force to the order of the mineral kingdom. From this plane, it passes up through the agency of vital force to the vegetable kingdom. Through the power of vital force of a higher kind, it is advanced to the animal kingdom. Here it is ready for man, and yields itself to the

uses of his life. From the time that vital force enters the realm of nature, a process of assimilation begins. The plant assimilates the mineral, the animal assimilates the plant, and man assimilates the animal. Through regular gradations, matter passes up from the bottom of nature into the service of man, who stands at the top. With each move upward it gets associated with force of a higher kind. With each advance its range gets wider and its movements freer. In the form of bread, it is sufficiently refined and sublimated to be appropriated and utilized for food, for shelter, for raiment, by the immortal spirit of man. The necessity for food, for clothing, for shelter, creates commerce, and commere accomplishes results far more important than the production and distribution of the temporal necessities of human life. It brings men together; it establishes relations. It is the wonderful institution

which, early in the history of the race, began as a loom to catch up the separate threads of individual life, to weave them into that marvelous fabric called humanity. Ends of an infinitely higher order are realized by the production and exchange of the elements of trade, than the satisfying of hunger with bread, or the furnishing man with clothing and shelter. The higher ends are the essential and ordained ends. That we may understand what an important part the necessity for food has played in the progress of man, it will be well to consider the significance of the relations it first helped to establish.

I.

All power whatever, that distinguishes man from the brute, that in any respect contributes to his commercial, mental, moral, or human value, is due to union, relation, action and interaction among in-

dividuals. In nature we may find illustrations of this truth. Sound, electricity, heat, and light, are forms of force which owe their existence to action, relation, interaction among material particles. They would never arise in a universe of unrelated elements. Their difference is due, not to the vibration of different elements, but to different rates of vibration among the same elements. Consequent upon certain terms of formal and quiet social intercourse among the molecules, there is sound. When they intermingle more actively and intimately, there is electricity. With a slight change in the method, but no decrease in the velocity with which they move, there is heat. When they go at the top of their speed, waltzing and swinging corners at an unthinkable rate, there is light. From varying relations and actions among material particles, we get the music which charms us, the means of communication which

unite us, the power to do work which serves us, and the beauty which refines us. The unceasing play of these simple unseen elements made the fame of Beethoven, who threw their vibrations into symphonies; and of Morse, who utilized their speed to carry the news; and of Watt, who hitched their radiations to the flying train; and of Daguerre, who put their undulations to painting pictures. All forms of physical force may be traced to the union, relation, and vibration of material particles. The distance from atoms to men is well-nigh infinite, but the points of resemblance between the genesis of physical force and the genesis of social force are sufficiently striking to make it permissible to trace the analogy between them. By social force is understood all those forms of energy which men find themselves to possess by virtue of their relations to one another in organized social life.

Commerce insures the union, and brings about the relations that make this force possible. It furnishes the conditions without which it could not be.

A self-contained, self-included, insulated person does carry within the depths of his being the organs of the civilized man, but they are as completely out of sight and out of use as the harvests that sleep within the kernels of the mummy wheat. If it were possible for an individual to come to years of maturity, out of relations with his fellows, he would be more destitute than a brute. Such an one, growing up in the woods or on an island, with no associates but the squirrels and the birds, would not have the personal furnishments of the monkey or the fox.

We can understand, too, by considering what man owes to his relations, how widely and completely he is separated from the lower animals. A thousand blackbirds,

living together in relation, are not different from a thousand blackbirds living apart and out of relation. A squirrel gains no element of squirrelhood by companionship, and loses no element of it in isolation. He may be taken from his nest as soon as he is born and never be permitted to see another squirrel, but he will be just as much of a squirrel, and know as well how to get the meat out of a nut, as if free in the forests with others of his kind. A mocking bird comes to the power of song as well in a cage, separated from other birds, as when fed and trained in the orchard by the mother-bird. The chords in his throat were set to music, and without teacher or praise, at a certain period of his growth, his song will ring through the house.

The difference between a man brought up in some lone woods, out of all relation with men, and one brought up in a civilized community, is infinite. The lower animals

get all they ever get by birth. No new gifts or powers come to them through companionship. They go unerringly to a certain destined end, whether they move in flocks or herds, or alone as individuals. Men, on the other hand, find themselves by coming together. Their organs sleep till waked by relation. By birth they can get nothing but the germs, the mere naked elements of what they are to become. Birth would be no blessing, but a deepening curse, but for what comes to the child through relation. Birthright alone is not worth a mess of pottage. Men often congratulate themselves on what they are pleased to term their individual rights and personal freedom. While men do have individual rights and personal freedom, it is always to be remembered that these belong to them because of the relations woven around them by the institutions of social life. The civilized man differs

more from the savage, than the savage differs from the highest animal. Yet the lowest savage is infinitely removed from the highest animal, but solely in the possession of the germs of the attainments and the accomplishments which may be provoked and maintained by relation. Society alone furnishes the soil in which these germs can grow. The savage, alone in the woods, might secure for himself a covering of skins, but the cloth in which the civilized man clothes himself is possible only in social relations.

With the commencement of human relations, the outlines of an absolutely new world come into view. Dim and vague at the outset, as the relations are simple and low. But as these increase in number, range, and degree, not only the outlines, but the far-reaching surface, the mountains, the rivers, the products, the sky, and the climate of a new world stand

out clear, definite, and unmistakable. This new realm we name *civilization.* It is super-imposed upon the physical world, but is as distinct from it as thought from the molecules of the brain. Nature furnishes the basis, but social relations furnish the conditions of the human energy that has lifted itself into the mighty edifice we call civilization.

All genera and species and families and individuals are so many forms in which the radiant energy of the sun has deposited itself. Playing with its heat and its light upon soil, sea, and sky, the sun has built the myriad organic forms we see. So all objects, interests, and laws embraced within the range of civilization are the forms in which social force, arising through relations, has deposited itself. Human language itself is an embodiment of social force. The grammars of different languages actually advertise the social status

and condition of the peoples who used them. In the Chinese language we have no distinction as to parts of speech, thus showing that the national consciousness was arrested at the stage of paternalism in government. The ancient Romans put enormous stress upon the will. They formulated the laws by which men are still regulated in civilized social life. A hint of this we get in the Latin language, by the small use made of the pronoun. Ideas, too, are expressions of translated social energy. Nothing seems to be more insulated than the human brain, by the aid of which the mind does its thinking. Out of sight and out of touch, within the dark depths of its own mysterious home, it would appear to be shut up to absolute solitude. Here, at least, we would expect to find individual, independent work. But not so. No individual brain can think, only as it uses the brains of others in the

process. Homer's Iliad is a poetic formulation of what all Greece felt. The elements of myth, thought, passion, which it contains, were all in the contemporary Greek mind. In committing this poem to memory, the Greeks were but storing up their own thoughts.

Hegel, in thinking out his remarkable system of philosophy, used the brains of all the men who had preceded him in the difficult work of solving the problems of existence. Darwin saw much in nature, because, through relation, he was able to look through the eyes of all naturalists.

All values, whether in soil, waterfalls. precious stones, or money, are forms of social force. Land in a great city sells for two thousand dollars a front foot, because millions of people, drawn by the powers of commerce, have come into fellowship upon it. Robinson Crusoe would have given all the money he had on the ship

for a loaf of bread. The heaps of gold and silver in Wall Street are so valuable, because seventy millions of people are circulating around them.

Moral laws are social products. They are not empirical, but fundamental, eternal. and essential. They inhere in the constitution of man. But it is only through relation that man comes to the recognition of them, as binding for conduct. Light and heat have their laws, definite and unfailing, but if natural particles never vibrated at a rate sufficient to create these forces, the laws would not appear. They arise along with the forces, and the same conditions which give rise to the forces, give rise to the laws. So moral laws accompany a certain degree of attainment and culture, only possible through relation.

Religion itself, the highest and most sacred deposit of human life, is a product

of social force. Whether we regard it as "modes of emotion," as Lecky; or the "recognition of all our duties as divine commands," as Kant; or as "awe in the presence of the mystery of an inscrutable power in the universe," as Spencer; or as "the infinite nature of duty," as Mill; or as "the immediate feeling of the dependence of man on God," as Schleiermacher, it never arises outside the range of relation. Still, religion is something constitutional, inalienable, divine; but man would never be thrilled by its hopes, or soothed by its peace, did he not stand in vital relation to his fellows. The elements and raw material of religion are eternally present, but relation calls into exercise the susceptibilities and faculties which appropriate these elements and raw material, turning them into hymns, theologies, prayers, sacrifices, liturgies, and ceremonies.

Commerce, by bringing men together

under the necessities of finding food, clothing, shelter, enables them to find their intellects and what they can know, their hearts and what they can love, and their wills and what they can do.

Thus we trace the genesis of social force, with the expressions which it makes of itself, in property, literature, law, art, and religion, to mutual human relations, for the establishment of which, among men, commerce seems to have been ordained. If men could, without trading, have found the means of subsistence, as do the foxes and the lions; then no relations in the high sense of the term would have been established among them; and like the foxes and the lions, they would have remained on the earth without progress and without history.

The sun must be making tremendous drafts upon some unseen sources of power, to be able to make, throughout the solar

realm, such ample expenditures of energy without bankruptcy.

The location of the vast depositories of power, upon which he draws so liberally, we are not to inquire here. We do know that the force which builds the forest, flushes the meadows with green, braids the vines into festoons, and peoples the plant-world, comes from the sun. Wherever the materials which keep the sun's fires burning come from, they must pass up to that center before they are available for service on this globe. The stamp and superscription of the sun must be upon them before they can take the form of grass, or leaf, or bird on the earth. In this sense stand human relations between the force contained in the individual, unrelated life, and the force which takes form in the objects of civilization. The crude and inarticulate force in the individuals of the tribe, or the nomads who only touch for war or passion,

must be refined through moral, political, and spiritual relations before it is ready to take the form of poem, anthem, temple, or Plato.

II.

We wish to determine the principle in accordance with which the production and distribution of food, shelter, and clothing are to be regulated. These forms of value are embodiments of social energy, generated through relations formed above nature by intelligence and volition. In nature, then, we are not to find the law that is to regulate them.

Bees build their cells, and birds their nests, and beavers their dams, not by intelligence and will, called into existence after birth through companionship, but by what is inwrought into the very fibers of their being irrespective of companionship. Birds, bees, and beavers have been in the world

thousands of years, yet the first bird, bee, or beaver ever created had as much sense as the last. A single bee has as much sense as all the bees in the world put together. Among all lower animals each individual inherits the sense of the species. Hence the law "of the struggle for existence," resulting in "the survival of the fittest," said to be a regulating principle in the plant and animal kingdoms, is not severe, regarded with reference to the individuals which inhabit them. But to regard the operations of this law as beneficent upon the plane of human life, as does Mr. Spencer, is altogether to overlook the obligations men are under to one another, because of their mutual relations. The life of each man, it must be remembered, in so far as it is above that of the unrelated savage, is contained in the life of every other man. In so far as it is comfortable, intelligent, and free, it has been brought to him, and

made over to him by his fellow-man. The law which is to determine the regulation of the elements of commerce, which are but expressions of the energy arising through mutual human relations, must be as elevated as the relations which commerce begets, and which in turn make commerce possible.

We must not go down among the tigers and the hyenas, who owe nothing but bare birth to companionship, where the principle of "the survival of the fittest in the struggle for existence" does prevail, to get the law which is to regulate the production and distribution of products possible only through companionship. Each individual, be he weak or strong, has contributed something to the social body. The strength of the one may have contributed courage, the weakness of the other may have called forth pity; but both pity and courage are virtues possible only in relation. A regu-

lating principle that kills off the feeble ones, and drives the weak ones to the wall, may do for brutes, who owe nothing to relationships; but not for men, who owe everything to them. The attempt to regulate forms of value in accordance with the law of "the survival of the fittest in the struggle for existence" does not have sufficient regard for the contribution each individual has made, by the very fact of his existence, to make these values possible. The leading political economists of the times have come to see that the law of extreme individualism, of "every man for himself and the devil take the hindmost," must be substituted by some more beneficent principle—by some law that pays more respect to the methods by which values have been created.

The province of commerce, as an institution, is to bring men together, not merely that the boundaries of commerce may be

extended and its volume increased, but that men may learn the mutual obligations they are under to one another, that their sympathy for one another may be enlarged, and that respect for one another may be engendered.

It is only in an atmosphere of mutual trust, sympathy, and respect that men can grow.

The need for bread, for protection, for raiment, prompts men to the exchange of products, that each may share into the work of all. But in the process of exchanging products, relations are established, through the influence and power of which an order of man comes the mere material comforts of life cannot supply. The significance of commerce, then, is not understood, if it is considered simply with reference to its immediate ends. These ends are met when men are supplied with the material comforts of life. Ends, however, are mediated

through it of a kind different in order and degree. These we consider the essential and ultimate ends of the relations which are established through the exchange of products. What, then, is the ultimate end and object of human relations? It is man. Man come to himself, conscious of himself, in possession of himself. It is human life, enriched, perfected, completed. It is man, strong, free, holy. It is man, not lost in the social texture, nor swamped in the social organism; but, finding his individuality and his peculiar, natural, simple self through them. The marvelous fabric the social loom was set to weaving is man. The highest end of social relations is a self-conscious, self-determining man, thinking the true, willing the right, loving the good. These relations constitute the organism out of which alone he can be born into symmetrical, well rounded life.

The lower animals come from natural

birth into the world entire and complete. The young eaglet is correlated to the sky before he leaves the egg. But man moves on a plane lower than the brutes, if he is not caught at birth and carried by relation to his proper place. As man is the highest product of social relations, it follows that the highest product is the ultimate product.

An apple tree may be used for fire wood, or sawn into planks, but apples are the ultimate reasons for the existence of the apple tree. Toward an apple the germ started when it burst the sod and stood a little sprig above the ground. Beyond the apple, the tree goes no further. It throws its roots into the earth and its branches into the atmosphere, and perpetually acts and reacts upon its environment, but all for the purpose of turning soil, and sunshine, and rain into apples.

As we have seen, a part of the social energy arising through mutual human rela-

tions is to be converted into language, values, literature, morality, and religion, as a part of the capital invested in a sewing machine factory goes into tools. But man is greater than language, values, literature, morality, or religion; as the sewing machine is greater than the tools by which it is made. Human relations create language, values, art, morality, and religion, that they may be used to advance and perfect the main work they were ordained to perform, "the making of a man."

When the people of a nation come to regard the elements of wealth, literature, art, or even religion, as ends to be enjoyed rather than as means to make man, they have missed the purpose of creation, and wander amid the mazes of stupidity and blindness.

As far as outward splendor and wealth were concerned, Babylon had no rival among the nations of ancient times. She

was a vast and rich empire. She embraced the most fertile portion of the globe. She had a capital that eclipsed all others in magnificence. Her hanging gardens were the wonder of the world; but her people stood not upon their terraces to observe the stars, or to reach a higher civilization through the realization of the nobler ends of their being. These were used as places of revelry and sensual enjoyment. Thus the only work of art that made them famous was used to make them stupid and depraved. Of her wealth she made an end. Putting no estimate upon men, through the relations of whom her wealth was created, she found at last that among all her people she had produced no man amply endowed enough to give permanent mental setting to her civilization and her faith. Her heart throbs, whatever they were, got explained in no history, interpreted in no philosophy, and lived in no

life. For knowledge of her, we are dependent upon her ruins, her pottery, her broken columns. Into oblivion has fallen all that bejeweled and pampered life that reveled in her palaces and amid her far-famed hanging gardens. Among none of her luxurious inhabitants did she develop a man to commit the keeping of her secrets and the record of her progress. Over her history has settled the stillness of the desert and the gloom of eternal night.

On the other hand, how secure is the Greece, that flowered in her great men! It was in the two centuries between 500 and 300 B. C., when she emphasized men more than the things they created, that she produced the men who have been the teachers of the human race. She has been despoiled of her art treasures, her temples have fallen, her Parthenon is in ruins; but the two hundred years of her life, which

she deposited in her great men, are immortal.

No tooth of time, no war's bloody hand, no devastation of the years, can take from her the glory which she lifted and locked in the genius of her generals, her statesmen, her orators, and her philosophers. Epaminondas and Pericles still fight for her, and guard with sleepless vigilance her fair name. Plato and Aristotle still interpret her problems of destiny. Sophocles and Pindar still sing her glory. Herodotus and Thucydides still keep the record of her victories. Demosthenes and Æschines still give imperishable expression to her conceptions of form and symmetry. She deposited her riches in the spirits of her great men, and they are forever secure. No thief can steal them, no rust can corrupt them. The unfolding centuries may look in upon them and enjoy them, but they cannot arrest them. The spirits of great

men, like immortal ships, sail the ocean of time, bearing the treasures of the civilizations which gave them birth. They outride the fury of all the storms, and will sail on, till

> The stars grow old,
> The sun grows cold,
> And the leaves of the Judgment book unfold.

But when Greece came to think more of the results than of the living men, she lost not only the power to produce the men, but the capacity to appreciate the results which had been created by them. Thinking more of the temple than the builder, she soon had no architect to conceive, and no son to understand the temple. Turning her national power into the spirits of her living men, she utilized the mountains and the mines in the service of beauty. But when life got cheaper than art, she no longer had power to create new art, or to protect from vandalism the old.

By removing the emphasis from men to things, she descended from the Crœsus to the pauper of civilization.

As long as Israel expended her national energy in the production of men, she had Moses, greater than the Tabernacle; David, greater than his harp; and Isaiah, greater than his song. But when the forms of her worship were emphasized beyond the spirits of her people she lost the devotion which created her church and the manhood that guided it. The men who formulated the laws that made Rome the mistress of the world, grew at a period when a Roman was the center of interest in the empire. But when her laws were stressed to the obliteration of her men, she had them still, without the ability to make more laws, or to execute the ones she had. Religion in India is emphasized more than character; hence her men are lost in a wanton and luxurious surrender to a mode-

less, transcendental, pure being, and she is practically without a history.

III.

The ultimate reasons, then, for the existence of social relations, brought about among human beings by exchange of products, is not the satisfaction of hunger, or the enrichment of individuals in material wealth, but the making of men. This being so, we are able to determine the law by which the production and distribution of commercial products are to be regulated. It must be a law that does not put the emphasis on the products, but upon the men who are to be elevated through their exchange. It must not be a law leaning to extreme individualism on the one side, or to extreme socialism on the other. It must have proper respect to the individual, and to the social organism to which he is indebted for whatever of power he pos-

sesses. That law has already been formulated for us. It is this: "Thou shalt love thy neighbor as thyself." This is the co-ordination of self-love and good-will. As has been well said, this saves for us the strength of private enterprise, and individual initiative, the vigor of the self-regarding motives; yet enthrones by their side as co-equal and co-regent powers, the principle of benevolence, the obligation to promote the common weal. Self-support, self-help, self-reliance, are still cardinal virtues, but philanthropy is given co-ordinate authority with them in the commercial world. This is the law most favorable to the growth of men.

Under its benign reign, men can come to themselves. Through the operation of this law, there will be no curtailment of the volume or the extent of commerce; but the emphasis will be kept in the right place, and men will not be lost in the

process of securing the elements of food and shelter. Commerce will be the means of mediating to men their higher nature. Surrounded by conditions engendered by the operation of a law like this, life will reach through relation higher and higher ranges of hope and insight. The elements of poems, symphonies, philosophies, temples, and pictures will flow in the blood.

The fierce competition we see in the commercial world to-day is the attempt to re-enact, in business life, the principle of natural selection, or "the survival of the fittest in the struggle for existence." This is the law of the jungle, but not of the social realm. This is doubtless the law among trees, determining their number, variety, and structure; for one tree gains nothing from association with other trees. This law doubtless operates in the sea, among the fish, and in the sky among the birds, for fish and birds are what they are

by birth and not by association. Mr. Spencer regards the operation of this law as beneficent. It kills off the unsuccessful members of society, it drives the weak ones to the wall. Those who survive in the struggle are the fittest. The Greeks, who put Socrates to death, were, according to this so-called beneficent principle, the fittest to survive. This law is regarded as beneficent as it operates among men to control their products, upon the supposition that man is an animal and a part and parcel of nature, as are the bears and the wolves. The things which elevate men and civilize them, however, do not come from nature, but are engendered through companionship and association. Hence, from the sense of obligation men are under to one another for the best and highest things of life, the law is to be deduced which is to regulate their commerce and to determine the character of their actions. This law is,

"Thou shalt love thy neighbor as thyself." Thus business looks to character. The discipline it insures is worth more than the money it brings. The highest product of trade is man himself. If in business such methods are practiced, if such aims are followed as destroy the man, however great the returns in money, it is a thousand fold worse than a failure. The man it was designed to make, it has destroyed.

IV.

The disposition to accumulate, which is right and praiseworthy, should always be modified by right knowledge of the uses of property, and the methods by which it is amassed. Nothing is more pitiable than for a person to have more property than he has manhood. This indicates that the stress has been on the wrong side of the wealth. Such a man is

under the sad necessity of taking his significance from the money he has accumulated, rather than the noble elements of life he should have secured in the process of obtaining it. With such a man, the end of business has been lost. He has consumed the end in the means. Instead of turning the elements of trade into manhood, manhood has been lost amid the maze and chaos of things. The order of progress has been violated, and the man, instead of moving on through business cares to immortal character, turns back to the earth, and seeks to substitute the tendency to move from it, by the disposition to settle permanently upon it. The desire to get rich has grown so abnormal and perverted, that it seeks to satisfy itself by the abundance of mere things. There are a great number of mowers and reapers, engines and cotton-gins, hats and shoes, pins and buttons;

but a man has been lost in the making of them. This is more than all the mowers and reapers, cotton-gins and steam engines, pins and buttons ever made are worth. It is not mete that men should be sacrificed to the beauty and perfection of machinery, or to things machinery turns out. It is not necessary either. What we gain is not worth what we give. The machinery should be so manipulated as to get the things, and at the same time secure the perfection of men through the process. It is not necessary for the painter to lose himself in his art, and sacrifice his manhood to make his vision glow on the canvas. A proper regard for the methods and uses of art will result in leaving in the living spirit a picture more perfect than any painted by the brush. John Bunyan did not lose his manhood in portraying the history of a human soul in its attempts to get

from earth to heaven. While conducting his pilgrim safely through the sorrow and temptations of life, to a home in a better world, he opened the pearly gates to his own soul. His work transfigured his life, and was the means of sanctifying it. All business and all work should lift up, and not hold down; it should make free, and not enslave; it should ennoble and not degrade. It is as honorable to make shoes or anchors as to paint pictures or write books. The shoemaker should learn the secret through his work of finding the sandals of manhood for his own feet. The blacksmith should learn, through the making of anchors for the great ships, to find the anchor that is to hold his own soul to the truth, amid the storms of life.

V.

If through trade only the material result is sought, the ends it were intended to sub-

serve are missed. Its bulk may be large, the machinery through which it is carried on manifold and complicated, but with the emphasis on the money side of it, no manhood will be reached through it. The man side of a button machine is infinitely more important than the button side. The buttons which fall on one side may conform precisely to an approved and an exquisite pattern, but if the person who stands on the other side does not, through the process of making buttons, get a man out of himself, the whole thing is a disastrous failure. Human spirits are too valuable to be used up in making buttons. More respect is to be had to the human side of the loom than to the cloth side. The most beautiful pattern of silk ever woven loses its power to please the eye when it is remembered that the soul of a woman has been drawn into its threads and colors. The sacrifice of individual life is impressive

and noble, if the object for which it is made is worthy. This kind of sacrifice is not the means of losing life, but of gaining it. But no material result to be used up in the passing season of fashion is worth such costly sacrifice.

Through forces we name capillarity, cohesion, and gravitation, matter accomplishes the purposes of thought. They are but manifestations of the power of mind working through them, to build up the mineral, vegetable, and animal kingdoms. They look beyond themselves. They work for higher ends. Thus all the industries we see in nature look to lifting and refining matter, and force high enough to serve the uses of human life. So the industries established on the plane of human life are to elevate man another step in the scale of being. Through sowing and reaping, through grinding and sawing, through spinning and weaving, through buying and selling,

through building and furnishing, he is to be carried on in the march of progress.

The history of the physical universe culminates in man, finds its interpreter and its interpretation in him. Never was the thought of him absent from her movements through Pliocene, Miocene, Eocene, Cretaceous, Jurassic, Triassic, Carboniferous, Devonian, Silurian, or Cambrian ages. In all her awful cosmic emotion to reach order and form, it was the anticipation of man that moved her, for he it is at last that comes of it. So, through all the course of her tumultuous history, nature was pregnant with man. The stars which sang together in the early morning of the world, caught the inspiration which gave melody to their song from the thought of him.

Commerce, if it is to be permanent and healthy and progressive, must fall into line with the purpose nature was put upon its perilous course to subserve. Her countless

forms of industry established by the law of supply and demand; her cars, rushing hither and thither all round the world; her great steamships on every sea; her great furnaces, whose chimneys lift themselves against the sky, must get their meaning and the reason for their existence from the fact that they are putting in their contribution to the making of a man. Her wheels are to fly, her spindles are to whirl, her paddles are to splash, and her hammers are to ring, making music amid it all, in anticipation of his increasing worth, his growing thought, his enlarging hope. Her countless wheels of industry will be throwing out axes, wagons, plow-stocks, handsaws, and reapers as they fly; but these will be only so many means used to discipline the precious life committed for a while to her training. What chemical affinity did in lifting the original elements to the mineral kingdom, and what the animal

did to lift the plant to the animal kingdom, so the trades and industries of commerce are to do in lifting human life from its individual, unrelated state to its social and fraternal state. The elements of commerce are to be the means to help human character out of human nature. Two kinds of raw material are to be refined. The iron in the mountain is to be turned into razor blades and caligraphs; the reeds in the swamps and the woods in the forests are to be turned into the notes of organ and piano; and in the process of refining these, man is to be disciplined in the use of himself, in the possession of himself, and in the command of himself.

POWER.

"Excessive devotion to the material is the evil of our epoch; hence a certain sluggishness.

"The great problem is to restore to the human mind something of the ideal. Whence shall we draw the ideal? Wherever it is to be found. The poets, the philosophers, the thinkers, are its urns.

"The ideal is in Æschylus, in Isaiah, in Juvenal, in Alighieri, in Shakspere. Throw Æschylus, throw Isaiah, throw Juvenal, throw Dante, throw Shakspere into the deep soul of the human race.

"Pour Job, Solomon, Pindar, Ezekiel, Sophocles, Euripides, Herodotus, Theocritus, Plautus, Lucretius, Virgil, Terence, Horace, Catulus, Tacitus, Saint Paul, Saint Augustine, Tertullian, Petrarch, Pascal, Milton, Descartes, Corneille, La Fontaine, Montesquieu, Diderot, Beaumarchais, Sedaine, André Chenier, Kant, Schiller—pour all these souls into man."

CHAPTER II.

THE PROVISION FOR THE SOCIAL NATURE OF MAN.

Man has a body and a spirit. By the one, he is individual; by the other, he is social. As individual, he needs bread; as social, he needs power. As body, he is born from the loins; as spirit, he is born from the social organism. In the process of finding food, clothing, shelter, to meet the needs of himself as individual, he discovers that illimitable social side of himself the material necessities of life do not supply. Here he finds power, a more subtle and universal element, ready to serve his higher need. This is the provision for the social side of man's nature; for, as individual, he does not need it, and could not appropriate

and use it if he did. As an individual, he can only avail himself of the use of power, through the attempt of the social whole of which he forms a member. In the primitive, unrelated, unorganized state, man is satisfied if he can secure food to satisfy his hunger, and a cave to shelter him from the storm. He does not even utilize the winds to draw his boat, until, through interdependence and mutual relations, he has reached a high degree of social life. The servants of man, on his individual side, are the foods of the field, the waters of the spring, the woods of the forest, the fruits of the orchard, and the wool on the sheep's back. The servants of man, on his social side, are the driving power of the winds, the transporting power of heat, and the thought-defying power of the lightning. As individual, he is a citizen of the community where he first sees the light. As social, he is a citizen of the world. Through

his body, he is naturally related to his ancestors; through his spirit, he is related to the human race. The rude elements of food, clothing, and shelter, he might secure as individual; but power, which waits to serve his higher, nobler nature, he can only secure through society. As individual, he is narrow, meager, local. As social, he is broad, rich, universal. On his individual side, he is centripetal; on his social side, centrifugal. Self-centered, self-contained, and self-included, on the one side; while, upon the other, he is possessed of the conviction that private right must be subordinated to public good. Tethered to the earth on the one side, linked with the immensities on the other. On the one side, his outlook is hard and literal and low; on the other, he seeks, through intellect, to transcend the infinite in time and space and truth. On the side of himself, as individual, he knows no right or wrong. On the side of himself, as social,

he recognizes the infinite in duty, and seeks harmony through the infinite in love.

II.

Yet this limited and unlimited self; transitory, perishable, and finite on the one side; everlasting, imperishable, and infinite on the other, are bound together in the same person. The fall of the one is accompanied by the descent of the other, and the rise of the one is accompanied by the ascent of the other. Their union involves perpetual conflict, and there waits on the turn of the battle, the depression of remorse, or the exultation of triumph.

On the individual side of himself, man would take up with the present, the immediate, with that which allures the sense, and, with unholy incense, regales the imagination. On the social side of himself, he would despise the immediate, and give the casting vote in favor of the unbiased,

immeasurable good. In such a being as man, conflict were inevitable. With a horizon measured by the edge of the plain where he stands on the one side, and a horizon melting into the infinite star depths on the other, it were but to be expected that a contest would arise between the larger and the lesser outlook. On the one side, he would possess the field, concentrate his attention upon its grasses and its fruits, and lose himself in its products. On the other, he would go forth to see where the stars are, to consider the sources of their light, and to travel with them along their silent paths. With a view measured by the hour that shuts him round on the one side, and with a view measured by the organic pulsations of the world on the other; the question would be, whether to give himself to the immediate pleasures of the hour; or to elongate the pendulum of his timepiece till it should embrace the

ages, and regulate his life by an eternal measure. With appetites on one side, clamoring for the things in sight, and with conscience on the other, calling for harmony with things high and remote; the question would be, whether to give the consent of the will to the demand of the appetites, or to the appeal of the conscience.

III.

Knowing the side of himself of which a man takes counsel—the individual, or the social—you are prepared to fix his grade in the scale of being. The difference between Benedict Arnold and George Washington was just this: in the case of the one the indiviual side was dominant; in the case of the other the social side held sway. This is the difference between the miser, despised of all, and the philanthropist, honored of all. This is the difference be-

tween the debauche and the saint, between the man who lives for his God and his race, and the man who pours himself out on his lust and his passion. If the promptings of the individual side of man's nature are to be distrusted and watched, while liberal and unstinted recognition is to be given to the social side, it is well to inquire into the meaning and office of this larger fact of his life.

Let it be granted that on the individual side of himself man has no kingdom of his own, no department of his own, no privileged class of his own, and no titled order of his own. Let this side of him be left to the naturalist, to be classed with the vertebrates, the mammals, or the primates. But what conclusion are we to reach concerning the social side of himself, that has found embodiment in that vast and complicated movement we call civilization? Through this age-long historic pro-

cess man has been seeking to realize the capacities of his larger nature. Like a magnificent temple, civilization has been rising through the centuries. Its walls have silently come up from the earth, like Solomon's Temple, without clink of trowel or sound of hammer. It is built of granite, cut from the Gethsemanes of history. Leonidas and his brave three hundred at the pass of Thermopylæ carved some of the blocks of this great edifice, into whose walls men have gone down as the living stones. The brave Britons; at the waters of Solway, lifted to place some of the richly foliaged pillars that stand upon its floors. William the Silent, while organizing the forces and achieving the victories of the Netherlands, was at the same time turning some of its arches and resting in place some of its architraves. The Martyrs, who went to undying fame and honor through fires of Smithfield, furnish

themes for the music which resounds through its corridors. It is the triumph of the social nature of man, and stands upon the soil which has been made by the crumbling dust of all generations of brave men. Its pinnacles and towers pierce the skies, and declare to the immeasurable heights, the force, the faith, the sentiment, and the love of man. It defies the elements of disintegration and change, and around the tops of its lofty pillars there cluster the buds of eternal spring. The gigantic trunks, whose arched branches support the roof of this great structure, express themselves in never withering flowers, and, where the boughs interlace at the summit of the arches, there comes the light of heaven to color and illumine. Yet within its doors we are in no forest of stone, where thoughts of men have been chiseled into semblance with the trees. Its foundations are built of convictions, its

pillars of hope, its vaulting of lofty purpose, and its windows of faith. Its cement is the blood of suffering, and its decoration the loves of heroes. It is the edifice man has built in which to house the social side of his nature. It contains and will conserve all contributions ever made to human weal.

In walking the streets of Rome, one has a strange and melancholy sense of the traditions and memories which cluster about every ruin and every spot. But around the myriad facts and forces of civilization there hang associations more pathetic still. Here we walk, not amid the ruins of the past, but amid the achievements, the victories, and the glories of the past. Achievements, victories, and glories not associated with broken columns, defaced monuments and moldering ruins, but with the laws and institutions of living men. We have here, in ten thousand embodied forms, the

travails of the souls of our fathers. Their spirits live in the words we use, their consciences bind in the laws we observe, their visions bless in the pictures we see, and their devotion sanctifies in the religion we love. All the blood ever shed in sacrifice, all the eloquence that ever thrilled senates and peoples in defense of the right, all the protests ever in silence felt or in public uttered against the wrong, are here held in everlasting form.

Are we to regard civilization, the manifold and complicated sum in which man's social nature has expressed itself, as nothing more than a natural product? Are we to account for this by the same physical principles in accordance with which the bee builds his cell, the monkey hangs his bridge, and the beaver erects his dam? Does this stately projection of man's social nature mean no more than some lofty Alpine Matterhorn, pushed into the heavens

by the unconscious fires in the earth's bosom? Is this only like some mighty Giants' Causeway, lifted up by the same physical forces and by the same natural processes? If this is so, why is it that when we turn away from civilization as a whole, to view it in some of its national forms, we see the spiritual ups and downs of history in such striking contrast with the uniform face which nature wears? If the radiant civilization of Greece, that filled the earth with the eloquence of thought and the melody of song, with the Republic of Plato and the Ethics of Aristotle, that clothed itself in the Parthenon of Phidias and the Iliad of Homer, was as natural among the nations as the uprising of Gibraltar among the mountains, why is it that Gibraltar still stands as the solemn sentinel of the Ocean and the Sea, while the civilization of Greece is but a memory of the past? The same sky and earth, and Mar's Hill are

there. Around her classic coast there still murmurs the same heaving sea. But while ships may still sail to Gibraltar, never more can they draw up to the Piræus of worthy representatives of Plato and Aristotle. Not again do men, with noble brows, deep eyes, and never dying thought, look into the Ægean from that memorable meeting place of the world's ships.

If the history of Israel, from the time of Abraham to the coming of John the Baptist, was but a natural product, as easy to be accounted for as the mountains round about Jerusalem; why is it that the mountains still encompass the holy city; while we find no more men like Moses, David, and Isaiah to lead, to rule, and to prophesy? There are the same Judean hills and valleys. There rapidly flows the same historic Jordan. There grow the same grapes, the figs, and olives. There are the same holy mountains. There are the same danger-

ous rocks in the sea at Joppa. The physical conditions that made the corn and the honey and the cattle are there; and there still are found the corn, the honey, and the cattle. But no massive man like Moses ever more climbs Sinai to get law on tables of stone, or Pisgah, to see the promised land and die. No man after God's own heart, like David, any more minds sheep, watches the stars, and writes poetry there. Never more do we find there a man like Isaiah, struggling on his knees in prayer that he may rise up to give his people the oracles of God. A shallow, degenerate and fickle people dwell amid the groves and the vines where once lived the great race which gave to men their ethics and the outlines of true religion.

If the civilization of Rome, that reached such volume and force as to make her the mistress of the world, was as natural as the rising and falling of the tides, why is it

that Rome is in ruins, while the tides continue to rise and fall? With no other aid than such as is afforded by natural law and physical force, we cannot solve this problem. Where monkeys grew once, monkeys grow to-day; where lions roamed once, lions roam to-day; where figs grew once, figs grow to-day. The same physical conditions, the same configuration of soil, the same degree of climate, produce uniform natural results from age to age. These may be counted on with the certainty of a coming eclipse, conditioned on varying conjunctions of the heavenly bodies. But we must pass from the level and range of soil, sky, climate, and physical conditions, to account for the fact that a country in one period of its history produces a Pericles, and, in another, a muddy-headed numskull; in one age an aristocracy of poets, artists, statesmen, philosophers, and orators; and in another,

a listless swarm of stupid and secular cumberers of the ground.

IV.

The explanation of this question is to be found in the fact that man has a dual nature, a body and a spirit, by virtue of which he is individual and social. When the center of gravity is on the social side of human nature, the fortunes of man go up; when the center of gravity is on the individual side, the fortunes of man go down. On the individual side, he is the subject of physical law. On the social side, of moral law.

That man was intended to express the force of his life through the social side of himself and in accordance with moral law, instead of through the individual side of himself and in accordance with physical law, is plain, from the fact that it is only when he gives social expression to his life

that he reaches any degree of commanding and permanent influence.

The unrivaled place which the Greece of Pericles holds in history is due to the fact that he lived at a time when the emphasis was altogether on the social side of her people. The individual side was completely subordinated to the life of the whole. It is doubtless true that she pressed a right to rule too far, and stressed the citizen too much, and considered the claims of the individual too little. A proper balance is to be preserved between the individual and the social man. But it is true that in merging the life of the individual into that of the state, Greece did prepare a soil compact and rich enough to grow the most ample harvest of literature, art, poetry, philosophy, and men, the world ever saw. As soon as the emphasis passed over from the social to the individual side, the process of pulverization began, and the

continuities of thought and aspiration were broken up. National unity was dissolved, and the conditions of great men and great results were no longer present.

The difference between the Greece of 300 B. C. and the Greece of to-day, is the difference between giving the national life a social and an individual expression. The Greece of 300 B. C. was a compact whole, made so by each man putting in his individual life as a contribution to the life of the state. The Greece of to-day is an aggregate of self-centered units, held together like so many potatoes in a basket, by outward force and barriers, rather than by loyalty, patriotism, fidelity, and the cling of man to man. In the Greece of 300 B. C. each man, while giving his individual life to his fellows, gathered into his own being all the life they had to give. Hence in Socrates we had a reproduction of all Greece. In Homer, all her poetic

passion, and expression. In the orations of Demosthenes, all the aspirations of her heart and all her love of liberty. In the Greece of to-day, we have not the same intimacy of companionship, or the same network of relationships. Each man, thinking more of himself as individual than of himself as social, finds it no longer possible to make levies on the lives of his fellows, to think his thought, conceive his temple, deliver his oration, or write his poem. So it follows, they no longer think great thoughts, conceive great temples, deliver great orations, or write great poems. Each man, in the high sense, being a separate sand, they have a social soil as barren as a desert.

Rome won her victories, wrote her laws, and laid the foundations of her world-wide empire, when her people gave social rather than individual expression to the force of their lives. A typical illustration we

have of this in the fidelity of Regulus. A prisoner at Carthage, he is permitted to go to Rome to induce his countrymen to make peace with the Carthaginians. He pledged his word to return if he failed. On reaching Rome, however, instead of seeking to persuade his people to make peace, he appealed to them to continue the war. The social side of himself belonged to Rome; speaking through that, he called upon her to prosecute the war. The individual side of himself was personal; acting through that, he went back to Carthage in honor of his pledge, to be cruelly put to death by his captors. This single incident is sufficient to help us understand why, from her seven hills, Rome conquered and for a long time ruled the world. The individual was sunk in the *Roman*. Not, as in the case of Greece, that his personal identity might be swallowed up in the mass, but that he might

find a personal identity as great as the empire, of whose social life he was the embodiment. Regulus was an epitome of Rome. In him was all her indomitable will, her moral sturdiness, her iron probity. In him she had a son, in the depth of whose spirit all the glory she had won in war, and all the control she had found in sacrifice, was safe. Regulus had the advantage of the Carthaginians, in that the larger, nobler side of himself was safe from their hate. The Roman, the social Regulus, was as eternal as the majesty, and fame, and mystery of the Roman empire.

The doom of Rome, as a nation, was never sealed till the stress was removed from the social to the individual side of her people. She might have lived on among the nations, as fixed as her own eternal hills, if the temptations to self-indulgence and self-gratification had been resisted. Her

downfall was not due to physical causes, but to her sins. Observance of the moral laws, which made her great, would have kept her great. When she threw her larger, social self into the fires of her individual lust and passion, she burned the foundations of her dominion, and a mighty wreck of shapeless ruins was all that was left of the once proud mistress of the world

V.

What is the correlate to the social side of man's nature? Where is the domain that matches it? Where is the vast realm, large enough to furnish sufficient scope for all the possibilities which seem to lie folded within it? A study of the eye reveals the fact that the light of the sun is necessary to furnish an element wide and ethereal enough for the exercise of its functions By a study of the ear, we learn that it is related to sound with all its pos-

sibilities of harmony. The fin of the fish is related to the waters of the sea. The bird's wing is a prophecy of the sky. The migrating instinct of the wild goose is related to the South, with its soft skies and balmy air.

In the calculations of Adams, in England, and of Leverrier, in France, the perturbations of the planet Uranus were in correspondence with the planet Neptune.

On the side of himself as individual, as we have seen, man is related to the earth with all it contains to satisfy the needs of the body. We wish also to determine the nature and dimensions of the sphere to which he is related as social.

We have seen that, even within national boundaries, human life comes to be fertile in great men, great deeds, and great art, when the expression of it is social, rather than individual. With such disposition of

her national life force, Greece reached an unparalleled height of grandeur and influence. But all outside of Greece were esteemed as barbarians. The barbarian hordes around her state were like so many walls, which kept the waves of national life from passing out into any world-wide sea. The limits were soon reached, then the waves receded, to be thrown back again in quick succession against the encompassing walls. Was this not in violation of the law and nature of the expression which the social side of man, by its very structure, is inclined to give of itself? Is it not, by its nature, disposed to pass out in accordance with moral laws, which have no boundaries and limits? And were not the walls they permitted their hate to build of the barbarians on the outside to arrest the outward flow of their national life, the evidence of a tacit treaty with their selfishness? Did these not, after all, bear witness

to a hampered and halted surrender to the nobler side of their nature? Did they not show that the Greeks were only willing to give social expression to their national life, as far as the boundary lines of Achai? Too noble to permit the emphasis to rest on the individual side of her people, as separate members of the state, she lifted narrowness and selfishness into greater place by giving them national form.

Too great of breadth to be individually selfish, she was not great enough to be nationally unselfish. The individual sides of themselves her people sacrificed on the altars of the state to her national unity, she transmuted into contempt and hatred of other nations. Selfishness only passed from the individual to the state. Retained by the state, it worked itself back into the individuals again, when the unity of the state was disintegrated. Do we not have in the limitations which Greece attempted

to put on the expression which the social nature of man would give of itself, the real secret of their downfall? If, while giving even limited social expression to her national life, Greece developed a civilization so rich, how much greater might have been her contribution to human progress had not the seeds of disintegration been sown among her people through national enmity and hate. In the two hundred years which embraced the most fertile portion of her history she laid the foundation of thought. But it was only through thought that she sought to solve the problems of life and destiny.

The social life of the Jews found only limited expression for itself. It was worked out into religious lines that were unlimited and all embracing, but this was in spite of their prejudices.

Their compact social life, the vast depth and vigor of their social vitality, the tenacity

with which they clung together, made it possible for them to lay the foundation of a religion and an ethics larger than they dreamed. Their scriptures, their prophets, and their saints were not possible in a soil less socially rich.

Their devotion, their loyalty, their voluntary subordination of private to public interests, their religious fidelity fitted them to become the children of God. The summit of civilization they reached enabled them to see and to transcribe the outlines of the kingdom of heaven. They ascended high enough the mount of being to recognize the laws necessary to regulate human conduct. But they permitted their narrowness and prejudice to build of the Gentiles about them, walls to limit the outflow of their national life. Hate for the unfortunate people without, could not be without its influence on the lives of those within.

The selfishness which, as a nation, they

cherished toward other people, reproduced itself at length in their own lives. From the children of God they descended until they became the children of the devil. The visions of their nobler men were discounted and despised. The selfishness that put them against the Gentiles, finally put them against one another; and while they kept together in a certain sense, in spite of the upper and nether mill stones of history, it was rather in memory of what they had been, than of what they were.

In the civilization of Rome, again, limitations were put on the expression of the social side of man's nature. Within the precincts of Rome, under her eagles and within her roads, there was a sinking of the individual and an expression of the social side, that has been rarely equaled in history. It was this merging of the individual units into the social whole of Rome, that made it possible for her to formulate

the legal measures and provisions which continue to protect human life and property. But sacrifice, companionship, social cohesion on the inside, could not, for many centuries, be accompanied with fierce opposition and cruel hate for others on the outside. It was inevitable that sooner or later the disposition on the outside would get distributed among the individuals on the inside.

VI.

The realm, then, to which man on the social side of himself is related, is larger than that encompassed by any national boundaries. The Greek, on the social side of himself, was larger than Achai, the Jew than Palestine, and the Roman than the Empire. The Greek developed thought, the Jew produced religion, and the Roman formulated law. But the larger side of man's nature is not met by thought simply, or by religion simply, or by law simply,

but by the combination of these in right proportions.

Man, on the social side of himself, is correlated through reciprocal relations to the human race. To limit the social expression of man's life is to contract its nature, and to violate the moral laws in accordance with which it must act. The understanding cannot rest in unrelated phenomena. Through science it reduces the forces of nature to one force, its energies to one energy, and its matter to its constituent elements. So the social nature must find harmony in the union and cohesion of scattered, separated human beings. It must have companionship, such as the relations of all men help to make. It must have a range as wide as the world. Because of the continuities of life and thought secured through universal social cohesion, it must be able to pass and repass through the length and breadth of human life. If

man's social nature is to find its correlate, the race must be so completely one, so compact and contiguous in the spirit of fraternity and good will, as to make it possible for each man to share in the work, thought, and virtue of all men. Individuals must be gathered into the network of social relations, so that, instead of separate and isolated units, they shall be known as farmers, merchants, blacksmiths, mechanics, shoemakers, lawyers, doctors, editors, and ministers. The calling of each must relate to the well-being of all. Every man must make for others and receive in return for the supply of his own wants something of all the others make. Into the multiplex flow of exchanges the shoemaker may put in simply one pair of shoes per day, as his personal contribution. To that extent he must be able to make levies on the contributions of all the rest. No one will be independent in an unrelated

sense. All will be dependent, and each independent, through dependence on the rest. The race, as civil society, will be at work under all climes, and on all soils, producing the infinite variety of goods for the world's market. By the specialization and division of labor, we will have great increase of skill and the multiplication of all products. People will be at work raising coffee and drugs in Brazil, tea in China, creating a myriad of manufactures in England, France, and Germany, growing fruits on the Mediterranean Islands; these then will be gathered by various means of transportation and loaded on ships and cars, to be carried to every place on earth; that everyone may have the whole earth to serve him, while on his part he renders service to all.

VII.

The universal organization of the human race into one social whole has been the

grand, far-off event, toward which the whole creation and the whole process of history has moved. Toward this the race has been moving through all the fierce antagonisms and bloody wars of the past.

Pestilences, which have decimated the ranks of men, and earthquakes, which have swallowed up great cities, have contributed toward this consummation.

The genius of men like Alexander the Great has been used to break up the narrow and provincial groupings into which men had settled, that a way might be opened for the distribution of products and the circulation of ideas.

In the early history of the race, the process of organization began. Every great man and every great movement helped toward its enlargement. Abraham, getting up from Ur of the Chaldees, and moving with his family and his herds across the plains of Syria, to plant a government

in Palestine, widened its sphere. Phœnicia, the strongest maritime power of ancient times, while she had no motive but gain for crowding every port with her ships, and for turning the world into an exchange, did augment the knowledge of men and increase the relations of men. The Jews, by their compact, social organization, lifted their national life into a great civilization. This civilization they sought to make provincial; they sought to fence themselves off, with all they had accumulated of devotion and law and literature, from the rest of mankind. But their social pulverization, due to their sins, helped forward universal companionship. They moved out into other parts of the world. They settled along the Black Sea and the Caspian Sea. They went into Asia Minor and back into Syria. They took up their abode in Alexandria and along the Mediterranean coast. Wherever they went, they carried

their civilization; their synagogue, in which to teach their knowledge of the one God; their Moses, to guide by his law their conduct; and their David, to soothe, with his songs, their sorrow.

The marvelous productions of Grecian thought and skill were kept, for a time, from the barbarians. They attempted a monopoly of beauty. But the breaking up of their Commonwealth hastened the coming of universal fraternity. They planted their civilization in Asia Minor. They went over to Syria, down to Alexandria, and around the Mediterranean Sea. Wherever they went they carried their language and their philosophy. The Romans broke down the walls between different tribes, and brought them under one law. They built roads into all parts of the civilized world, and thus prepared the first great highways of travel.

Looking from this distance, back upon

the movements of these great peoples, it seems as if they might have been, on set purpose, devising schemes and laying plans for bringing the world of mankind together. It really looks as if all peoples above the grade of the savage had been unconsciously and in spite of themselves working for the unity of the race. The very walls that have been raised to keep men apart have been battered down and used to make roads to bring them together. The mountains, that served as barriers to separate them, have been tunneled to unite them. The oceans, that seemed absolutely to insure isolation, are now the favorite means of communication. All inventions and discoveries have helped to the practical oneness of the race.

The mariner's compass, gunpowder, the printing press, the steam engine, the electric telegraph, the sewing machine, the spectroscope, the electric light, the tele-

phone, with the phonograph and microphone, have wrought for this end. The discovery of the sun's place in the heavens, and of the shape and movements of the earth; the discovery of America and of the law of gravitation; the discovery of the circulation of the blood and of the wonderful remedies in nature which relieve the ills of the body, have all reduced differences and augmented unity. Theologies, which have divided men into religious partisans, fomenting strife, and producing wars; which have separated men into parties bitter and revengeful; have grown kinder and humaner as the years have passed, and tend now to unite men, rather than to divide them. Philosophies, which kept men apart under the heads of nominalist and realist, sensationalist and idealist, are now deduced from a broader survey of the facts, and tend to harmony rather than conflict.

From the beginning nature and human effort have wrought together for universal good will and social organization. Lapses have been frequent and the net gain of fraternity small, but from age to age, without cessation and without intermission, in volume and sweep, it has been increasing.

VIII.

Because of the limited knowledge men had of the uses of power in the past, the growth of universal social organization has been slow. Methods of intercommunication between nations wide apart were meager, hence the people in one division of the globe could know but little of the people who lived in another. Any part of the earth not understood was counted as desert, and any people not known were considered barbarian. But with the new uses and applications of power, all this is changed. The world now lies open to all.

The antipodes are neighbors. By hitching the sun's heat to the flying train, and the canvas to the favoring winds, and the lightning to human thought, all races on the globe stand face to face. The world is being encompassed, and no natural obstacles are now permitted to stand in the way of railway lines, or of submarine cables. All mountain chains are being tunneled, all chasms spanned, all oceans traversed, and all straits bridged. The continents of the earth are now connected by 125,000 miles of submarine electric cable, and countries are crossed by thousands of miles of railroad lines. With an abiding and irrepressible, even if unconscious sense, that on the social side of himself he is related to the whole human race, man has well-nigh subdued the earth, and removed the obstacles that opposed the realization of his larger nature. Already great enterprises are being contemplated, which look

to the speedy removal of whatever remaining obstacles there are to world-wide companionship among men. Some of the great enterprises already projected which are to help toward universal brotherhood, have been noted by Mr. Charles Hallock. A railway is to be built from Joppa to Jerusalem in Palestine, and a bridge across the Straits of Dover near Folkestone.

The Mombasa and Nyanza Railway in Africa is to connect the Nile with the interior lakes and with the coast. A railway is to be constructed across Siberia, from St. Petersburg to Behring Strait. Upon this side a railway is to be built across Alaska to Behring Strait, while Behring Strait is to be bridged or ferried. A canal is to be cut across the Isthmus of Corinth in Greece, to connect the Ægean Sea with the Gulf of Corinth. There is to be a ship canal around Niagara Falls, and a railroad from Quebec to Belle Isle in

Labrador, with connecting ocean steamship lines to Medford in Wales. There is to be an ocean cable from Clew Bay, Ireland, to Greeny Island, Strait of Belle Isle, 1900 miles long. And a railroad from Winnipeg, Manitoba, to Hudson Bay, and steamship line thence to Liverpool.

A railway is contemplated from Winnipeg to the Saskatchewan River, across the Northwest Territory. A tunnel is to be cut under the Hudson River at New York, and a tunnel under the St. Clair River, between Sarnia and Port Huron, Mich. That the Panama and Nicaragua canals have been projected and partially completed is known the world over. A tunnel is to be made through the Atlas Mountains in Russia, and the great Northern Railroad Company is to make one through the Rocky Mountains in Montana, and another is to be cut through the Sierras from Truckee River, Nevada, into California. There is to be a

canal from Knoxville, Tenn., through Alabama to the Gulf of Mexico, and one from Chicago to the Mississippi River, which is to cost $25,000,000. A ship railway 60 miles long is to be completed from Georgian Bay to Lake Ontario, connecting the Great Lakes and the St. Lawrence River, costing $12,000,000. A canal is contemplated from Chicago to the Gulf of Mexico, and also a ship railway around the Dalles of the Columbia River. There is to be a ship canal across New Jersey to the Atlantic Ocean, 60 miles long, and a ship railway to connect the Gulf of St Lawrence with the Bay of Fundy, 12 miles long, to cost $12,000,000. There are to be steam lines from Tampa, Fla., to all parts of the West Indies, a longitudinal railway through the axis of North and South America, from Chicago to the Argentine Republic; steam lines from Vancouver in British Columbia, to Japan and Australia,

and steam lines from New York to the Carribbees and the Windward Islands. There are to be steam lines from Scotland to the North Cape and the Antarctic Ocean; stated voyages between Sitka, Alaska, and Point Barrow in the Arctic Ocean, and steamboat navigation of all the great lakes and rivers of Siberia, British America, and Central Africa. Ports of entry are to be established in all countries to furnish terminal facilities for these far reaching lines of transportation.

We are to have federation among the nations, as we now have it among the States of the American Union. The social cohesion, once national, is to be international. All are to think for each, and each is to think for all. All are to work for each, and each is to work for all. All are to plan for the good of each, and each is to plan for the good of all. Thus the inequal-

ities of life are to be reduced, and the littleness of life is to be redressed.

As all the power in the vine and its branches to make grapes is expended in the rounding and sweetening of each grape, so all the power in the social whole to make men will be reproduced in each man. All the justice in the race will regulate each man's will, all the thought in the race will replenish each man's mind, and all the love in the race will feed each man's heart. Nothing less than this social whole, in which are bound together in one organic body the lives, the welfare, and the hopes of all, is the correlate of the social nature of man. Toward such a world-wide organism, each living in the whole and the whole living in each, his social nature reaches out and is never at home until it is found. Such universal brotherhood would be impossible without power in all its manifold forms. This serves the social body as

bread serves the individual body. Power, as the servant of the social body, waits on each man through his relations with the social whole. A city builds gas works and finds it possible to let down the price in proportion to the number of those who use it. A railroad company can lower the rate on passengers and freight in proportion to the number of men who travel and the volume of freight transported. The price of a newspaper goes up or down as the number of subscribers increases or diminishes. Mr. Edison expects to get electricity from the disturbed conditions of the air, without the use of fuel. This will make the conditions of life easier by one-half; and then, as the number of people increases who avail themselves of the uses of power, the conditions of living will still be easier. Not only will the unity which comes through social organization lower the rate of insurance and the price of the necessi-

ties of life, but this increased force of the social whole will tend to the moral health of the people in the same degree. Health in one part of the body will be brought to bear to correct disease in another part. The conscience of the whole will be turned into the degraded sections of our great cities, and the sympathy and love of all will be called out to reclaim them. Starvation in one part of the globe will be met by the over-supply of bread in another. Oppression and tyranny in one nation will be opposed by the sense of fairness and overcome by the love of freedom in all the rest. As climatic conditions are made friendly to life by the circulation of oceanic and atmospheric currents, so moral health will be preserved by the circulation of the currents of conscience and justice.

IX.

The emphasis is to be kept on the social rather than the individual side of human nature; not that personality may be lost, but that it may be gained.

The social mass that constricts and squeezes the single life until the virility of self-assertion and the right of private initiative are destroyed, is no improvement on Bedouin isolation. The latter brutalizes life, while the former eviscerates it. The eye does not lose its capacity for sight, and its place of peculiar responsibility by being brought into reciprocal relations along with other organs in the same body. It would have no meaning and no power of vision apart from relations with other organs. The ear is not discounted, nor are its wonderful functions belittled amid the manifold members which work together in the same human frame. Its position of

honor is secured to it by the organic relations it sustains to the other members. The foot, the hand, and the tongue find themselves and their uses as they unite together in one living whole. The lone Bedouin, with no laws and no relations, seems to have all liberty, but in reality he has none. He is as completely without meaning as would be the finger separated from the hand. The man of whom nature is a prophecy is not the being in the woods whose home is a cave and whose food is wild meat; but it is the man in society, whose home all woods and metals and stones have helped to build, and whose food all soils and skies and seas have helped to produce.

The emphasis is to be kept on the social side of human nature, because it is through that side of himself that man is to pass into the world-wide work and the glorious destiny for which he is fitted. Through

that side of himself he moves out into order, and strength, and freedom. All men whose names are cherished in history, passed into place, influence, and honor through the social side of human nature.

In passing through the social side of himself, the life man finds is a million times larger and richer than the life he loses. That men might find the life that belonged to them, the only life worth living, the tendency from the first has been toward the solidarity of the race. The relations growing out of such solidarity are constitutive of the being of each man. The important properties of an acid cannot be known, when it is considered out of relation with an alkali. What a thing is for another, that it is in itself. So what a man is through relations with others, that he is in himself. But what he is in himself cannot be known until he comes into relations with others.

Solidarity is not to swamp single lives, but single lives are to come to all that is peculiar and high in themselves through solidarity. The universe is to preserve relations with each private spirit. By the organization of men into one social whole, provision is made for each man to participate in the life of humanity. It is intended that all the oceans of life shall reach, through their waves, the shores of each man's being, and leave deposits of all their wealth in each man's spirit. When we speak of the horse, the eagle, the whale, it is understood that we are using generic terms, and are intended to refer to no particular horse or eagle or whale. Yet in each horse the species is reproduced, and in each eagle the species is epitomized, and in each whale the whole whale type is summarized. This is done in the case of the lower animals, without their thought or volition. No universal relations are necessary among

whales, for each whale to have within itself all the peculiarities and furnishments possessed by all whales. The species are to be realized in each man, too; but this is to be accomplished through social relations among all men. All the men in the world must touch each man, to call forth the capacities which lie folded within his life. Humanity, as parcelled out in nations, generations, epochs, must lift itself into the being of each man; as the ocean, parcelled out in Atlantics, Pacifics, Indians, Arctics, Antarctics, lifts itself into each wave.

Power, parcelled out in gravitation, heat, and electricity surrounding the globe; advertised in every apple's fall, declared in every flash from the clouds, and present in every sunbeam; stands ready to make universal brotherhood, not simply an ideal, running through the dreams of poets and prophets, but an actual fact. The recog-

nition of power, as the provision made for the social nature of man, is enabling us to realize the dreams of prophets and poets.

TRUTH.

"A century is a formula; an epoch is an expressed thought. One such thought-expressed civilization passes to another. The centuries are the phrases of civilization; what she says here she does not repeat there. But these mysterious phrases are linked together: logic—the logos—is within them, and their series constitutes progress. In all these, phrase expressions of a single thought, the divine thought, we are slowly deciphering the word *fraternity.*

"All light is at some point condensed into a flame; likewise every epoch is condensed in a man. The man dead, the epoch is concluded: God turns over the leaf. Dante dead, a period is placed at the end of the thirteenth century: John Huss may come. Shakspere dead, a period is placed at the end of the sixteenth century. After this part, who contains and epitomizes all philosophy, may come the philosophers—Pascal, Descartes, Molière, Le Sage, Montesquieu, Diderot, Beaumarchais."

CHAPTER III.

THE PROVISION FOR THE INTELLECTUAL NATURE OF MAN.

Truth and reality stand for the same thing. Reality is truth out of the mind, and truth is reality in the mind. Reality is objective truth, and truth is subjective reality. But all reality is in relation to mind; objective reality to the divine mind, and subjective reality to the human mind. Objective reality is the realized thought of God; subjective reality is the realized thought of man. The correspondence of thoughts to things is called scientific truth. Objective reality is truth, because it corresponds to the thought of God. Knowledge in the human mind is truth when it corresponds to objective re-

ality or the expressed thought of God. When words and conduct correspond to knowledge, we have truth in the domain of morals.

In saying that objective reality is the realized thought of God, we denote its unity. This is not to destroy the particulars of which it is composed, or to swamp their individuality in an inarticulate mass, but simply to indicate their oneness.

When the observer looks out into the universe, which includes and shuts him round, he is impressed by the infinite varieties and diversities which everywhere meet his gaze. No two things are alike. No two leaves, no two drops of water, no two snowflakes, no two apples, no two faces. Every particular thing seems to be persistently determined to differ, in some respect at least, from everything else. The history of true knowledge begins, however, with the observation of resemblance and simi-

larity—just beneath the surface of difference and variety. The lightning that appears on the bosom of the cloud, like the writing of some awful fiend, is seen to be the same with the gentle sparks emitted when a tag of silken ribbon is drawn briskly between the fingers. The power that pulls the ball to the ground is seen to be the same as that which keeps the sun in his place.

The plant lifts itself up as but a sum of organized varieties; but every part, corolla, petal, and stamen, is known to be only modified leaf. Keeping to their silent and lonely rounds since the dawn of time, are the stars in the heavens, differing in color, orbit, and size, but we now know that to understand the elements of which they are composed, we have only to lift our foot and see what the constituent parts of the earth beneath it are. Were objective reality one amorphous mass, it would not be

intelligible. It is one and many, particular and universal, singular and manifold, concrete and discrete. All things cohere in a centrality that includes and commands them.

So true is it that unity underlies all difference, that no single variety can be understood, only as it is considered in relation with the whole of which it forms a part.

No one could ever get a correct notion of a particular star by directing his entire attention to the study of that star. To understand it, he must study it through the system of which it forms a member, and in connection with all laws and forces related to it. Oxygen separate and distinct from other elements has no meaning. It gets its definition and significance from the things to which it is related. What it is for rocks and water and trees and globes, that it is in itself. But it must be seen in connection with these before we can know

what it is in itself. What an acid is for an alkali and for other things, that it is in itself. Alone, out of relation, we could know absolutely nothing of it. Society is the organism that reveals to each person the nature of his own life. Out of contact and touch with other human beings, no one would ever know anything concerning himself.

Objective reality embraces manifold variety, but it is the unity that presides over it that makes it intelligible. Difference provokes questions and unity answers them.

In calling objective reality truth, we tacitly assume the laws and relations constitutive of it. We could not speak of the truth of the globe, had there been no method in its formation, no order in its development, no system in its parts, and no relations between its constituent elements. To speak of the truth of it, is to

imply the thought of it, the intelligibility of it. Were it not the expression of mind, man's reason could find no truth in it. Scholars have been able, after long and painstaking study, to understand the meaning of Egyptian and Assyrian hieroglyphics, but they never could have found thought in them, had they contained no thought. The original elements which make up the matter of the globe, have come into such relations with one another as that they make up the soil, rocks, water, trees, and animals we see. Thought, then, is the result of the internal relations of the particles which compose it. These internal relations, too, constitute its intelligibility. The globe that wheels on its axis is objective. This may be taken into the mind, and by its synthesizing, organizing activity converted into a subjective globe. The difference between the objective and the subjective globe

will be, that one will be thought and the other will be thing. But the same internal relations found in the objective globe will be preserved in the subjective, and the transcript of the globe that is held in thought will be truth in exact proportion as it corresponds to the material globe that rolls out of the mind. That an objective globe, which is a thing, may become a subjective globe, which is a thought and not a thing, implies that there is something in common between thoughts and things; that is, the mind, by its constitution, is capable of apprehending and taking into itself the constitution and relations of things. This is its capacity for truth, and shows that truth is not foreign to it, but one with itself.

The sides and angles of a right angle triangle have certain relations to one another. The square described on the hypotenuse of such an angle is equal to

the squares described on the other two sides. This may be demonstrated on a piece of blank paper, or the mind may conceive a right angle triangle, and prove the proposition without making any marks at all. The constitutional relations which were in the nature of a right angle triangle are the same, whether it be drawn on paper or conceived by the imagination. The relations of the triangle make it intelligible, because they constitute its truth.

I.

To truth the intellect is related, as is the eye to light, and the ear to sound. If the eye were destroyed, the sun would not cease to shine. His light would still come upon hill and plain to feed the flowers and to disclose their beauty, but without the organ of vision no creature in the universe would be able to see the things which his light reveals. The ear does not create

sound. Let it be forever sealed, and the Niagaras would still continue to fall and the thunders to shake the heavens, but they would not be heard. The intellect does not create truth, but it is the only faculty with which man is endowed by which he is able to discover it.

It was the error of the idealists that they made the order, laws, and relations of things as so many principles projected out of the the observer's own mind into the universe about him. What he seemed to see in things, were but modifications of his own mental states. The only order things had was in the observer's own mind. It was regarded not only as the pivot upon which the universe turned, but also as the creative principle from which the universe took form. Apparently this was a great gain to mind, but it was at the expense of any real world for the mind to contemplate. It seemed to win a victory for the intelli-

gence absolute and entire, but it was by shutting it up to its own shadowy abstractions, and abandoning it in a shoreless and bottomless void to its own vain musings. The personal pronoun *I* was extended perpendicularly and horizontally, till topways and sideways the whole of space and time was filled with it. No solid earth, no burning sun, no rolling orbs were left. A great, illimitable, irresponsible ego became the sole occupant of all that is.

This extreme idealism is in direct contrast to the realism of the early thinkers. They taught that things depended on man neither for their existence nor there intelligibility. That each thing carried the real intelligible essence as an ultimate fact in itself. Thought in man was but the reflection of this intelligible essence in the thing, as the light in the mirror is but the reflection of the light of the lamp.

Of the two systems, extreme idealism is

preferable to extreme realism. All mind and no matter, is better than all matter and no mind. Thought with no place to stand, is better than a place to stand and no thought. The eye with nothing to see, is better than something to see and no eye.

The solution which realism gave of the problem of existence, left no place for mind, the solution which idealism gave of it left no place for matter. But both the external world, upon which realism was founded, and the intelligence, upon which idealism was founded, are expressions of mind. The one as intelligible content, the other as combining active capacity and the intelligibility of the content, exactly corresponds to the active grasp of the capacity.

II.

But it must be remembered that the intellect which is the organ of truth, and objective reality which is abstract truth, do

not come together to form knowledge in any accidental way.

A basket may be said to have capacity for holding potatoes, and potatoes may lend themselves as content to fill up the basket. But the union of potatoes and basket; the one as content, the other as capacity, is only mechanical. The basket would serve as well to hold onions, or muskadines, or chinquepins, as potatoes, and the potatoes could be carried as well in a wooden box or in a tin pan, as in a basket. No necessity inheres in the nature of a basket to contain potatoes, and no necessity is in the nature of potatoes to get into a basket. Truth and the intellect, however, are intended the one for the other. Truth is correlated to the intellect as the bird's wing is to the atmosphere. Nothing can take hold of the truth but the intellect, and nothing can satisfy and furnish the intellect but truth.

Abstract truth, or objective reality, is converted by the combining organizing activity of the mind into knowledge, and when this knowledge corresponds to the reality it is truth in the realm of thought.

Before knowledge is possible, then, there must be an intelligence capable of knowing, and an object capable of being known.

How the intelligence and the knowable object get together to form knowledge is the most important question in philosophy. Upon the right settlement of it, everything depends. This has been the point about which the battle of thought, in modern times, has been most fiercely waged. If the mind firmly grasps the meaning of this problem and settles it right, it is almost sure to think right on other questions. If it is wrong here, it is sure to be wrong everywhere else. Mistake here is as fatal to the correct solution of the question we are con-

sidering, as would be the mistake that two and two make five to the correct solution of a sum in arithmetic.

III.

The distance of a question from ordinary thought does not render it any the less important, even for ordinary thinking. How the knowing intelligence and the knowable object get together to form knowledge is the most important problem to-day before the human mind. If writers would only take their bearings from the only rational solution that can be given to it, they would find half the books they are writing on the inspiration of the Scriptures, the existence of God, the divinity of Jesus Christ, agnosticism and materialism, unnecessary.

Agnosticism and materialism pass away with a correct theory of knowing. Labor and painstaking thought are involved in

the task of getting a right theory of knowledge, but agnosticism and materialism are in line with ignorance and indolence.

So, while few men ever ask themselves how the knowing intelligence and the knowable object get together to form knowledge, millions of men are affected, even in their practical life, by the answer which is given to the question. Someone has said that not more than six men in any one age ever read Plato or understand him. Yet for the six men Plato comes down through the ages. The six men who understand him translate him into the vernacular of the one hundred men who live on the next plane of thought below them.

The one hundred translate him into the common language of one thousand below them. These, in turn, translate Plato into the ordinary thought of the millions below them. So it happens at length that Plato gets so universally known, that not a

laborer in the field but wears his hat after one style, rather than another, because Plato wrote.

Doubtless it would have been considered a very unimportant question two hundred years ago, as to whether heat were an igneous fluid or a mode of motion. Perhaps not more than two or three men wrestled with the question for centuries before it was settled. By the masses of the people they were regarded as wasting their time in vain and idle speculation. By an experiment made by Count Rumford, it was put beyond the possibility of doubt that heat was not an igneous fluid, but a mode of motion. Was this a question that concerned the multitudes, that two or three men spent a hundred years talking about and torturing their brains to understand? There is not a single human being in the civilized world to-day whose interests and welfare have not been touched

by the settlement of it. There are millions of peasants in Russia who never heard of Count Rumford, or of an igneous fluid, or of caloric, who have this present year been fed by flour sent them by the western millers and transported on the strength of the conclusion that heat is not an igneous fluid, but a mode of motion. Every steam-car that crosses the continent, and every steamboat that crosses the ocean, moves in the wake of this same conclusion. At first we see some algebraic formulas, an array of curves and figures, that practical people said had nothing to do with everyday life. After a while we see the abstract conclusions reached by aid of the algebraic signs, and settled by the test of experiment, translated into steam engines, and transporting even the peasants of India and Mexico from one end of the country to the other. We see the abstract conclusions of the few thinkers turned into steam to

spin the people's clothes and grind the people's bread.

In 1632 there was born at Wrington, Somersetshire, England, a boy, who was educated at the University of Oxford. In the esteem of his contemporaries he devoted his time to the consideration of subjects of no practical value. In the course of events he put the results of his study into a book known as "The Essay on the Human Understanding." Few people read it. But the few who did read it started the ideas of it to circulating. They were translated into French and Latin, and were soon potent influences in the intellectual life of Europe. Were they practical and did they concern the ordinary affairs of men? They created the Encyclopedists of France. These learned men were the authors of the radical opinions which cut the people from the moorings of traditional and age-long thought. The fire and the blood of the

Revolution were the legitimate expressions of the speculative essay of John Locke that not one in ten thousand ever read. The persons whose heads were cut off in the Reign of Terror must have thought the ideas exceedingly practical that led to the destruction of social and political institutions, that took form in a movement which respected neither law nor property nor life. The speculative opinions of John Locke not only helped to create the French Revolution, but they led to the idealism of Bishop Berkeley, and this in turn to the skeptical philosophy of David Hume. The modern successors of Hume are John Stuart Mill, Herbert Spencer, Leslie Stephen, Frederic Harrison, and Professor Huxley, whose contributions have been given to the popular reviews, and which have been read by all intelligent people. Every man in Europe and America has been influenced both in conduct and character by the spec-

ulative "Essay on the Human Understanding."

Locke's speculative philosophy passed through Berkeley to Hume, and through Hume reached Kant, the great German thinker, and resulted in the "Critique of Pure Reason." This led to Fichte and Schelling, and finally to Hegel. This led to Heidelberg and the Tübingen school, to Bauer and Dewette, to extreme idealism and rationalism, translated into books and reviews and newspapers, and read by all the people, affecting their thought and life.

Even people who never read, who never open a book or a newspaper, have been influenced by the subtle piece of speculative reasoning given to the world by the great sensational philosopher of England. The spirit of utilitarianism and secularism prevalent throughout the world at the present time is easily traceable to it.

IV.

Before we can possibly know that truth is the provision for the intellectual nature of man, we must determine whether the knowing faculties, which he finds himself to possess, are capable of grasping truth and turning it into knowledge. The fight of skepticism in modern times has been made upon the knowing faculties. It is useless to talk about the existence of God, the inspiration of the Scriptures, the divinity of Christ, or the immortality of the soul, if the human intellect is, by its limitations, denied the possibility of knowing anything whatsoever concerning these things. It is a waste of time for me to attempt to dip water out of the ocean with a bucket with no bottom to it. What is the relation of the intelligence to the outer world? Does the outside world create knowledge in the mind by the impressions it makes upon it,

or does the mind bring something to the outside world which converts this raw material into knowledge? Is knowledge a reflection of the outer, or a creation of the inner? Does nature work it in us, or is there some spontaneous, creative, organizing, mental activity within us that takes the material presented by nature, turning it into a rational system of knowledge? What is the relation between the being that knows and the object known? How much of the creative factor of knowledge does nature supply? How much does man supply? Can a man with deranged faculties get order out of a rational world? Can a man of sane mind get order out of an irrational world? If there is to be a rational system of knowledge built up in the mind, must there not be reason in the thinker and reason in the outside world, coming into organic relations, the one with the other? As to how we regard this

question will determine how we regard truth, and whether or not it is possible for us to know it.

V.

The human mind has never been able to resist the conviction that there is such a thing as truth. Though baffled and defeated a thousand times, in every age, in its attempt to formulate truth, it has never been able to consent to give up the search for it. Interest in truth has kept alive and fostered the belief that the mind has power to understand it. The mind's passion for truth has deepened its confidence in the faculties with which it is ever trying to discover it. The everlasting longing to know truth has been taken as implicit capacity to find it. Philosophic systems have been only so many devices and creations of the mind with which to take hold of truth. The methods proposed, in the first stages

of philosophic thinking, for getting at the truth were crude, as the first instruments devised for cultivating the soil and getting out of it what there was in it for food, were crude. Thales, Pythagoras, and Anaximander first attempted to penetrate objective reality, to know its cause, to bring its multiplicity to unity, and to reduce its variety to law. The ever-changing phenomena by which they were surrounded necessarily eluded the meager theories with which they attempted to reduce them to order. They prepared the way, however, for systems which accommodated a greater number of facts. They made possible Plato and Aristotle, who, with hypotheses more complicated and more consonant with the reality they sought to grasp, found truth enough to keep the human race thinking for two thousand years. The blocks of truth they quarried from the mines of objective reality were used to carry up the

theological and speculative temples of the Middle Ages.

After the failure of scholasticism, which denotes a period in human thought rather than a particular system of philosophy, Lord Bacon proposed the method of material induction to bring the mind into relations of knowledge with truth. He emphasized the study of the outward facts, their classification and organization. In his esteem, truth was to be reached by the consideration of actual, tangible things. Man was the interpreter of nature, and not necessarily its interpretation.

Truth in the mind was the image of objective truth. It differed from truth out of the mind, as the direct from the reflected ray. He failed from lack of adequate recognition of one of the important factors in the problem of truth. Descartes' method was more successful, because larger and completer recognition was taken of man.

He began by doubting everything that could be doubted. Heir to the beliefs of all the ages, he determined to summon these, one by one, before the bar of reason, and force them to show cause for their existence. Everyone was to be called into court and put out that could be doubted. The existence of a God was called up and doubted, condemned, and put out. The existence of an external world was called up, doubted, condemned, and put out. In the same summary and shorthand way, man and mind were doubted and put out. All positive beliefs were doubted. After his process of elimination, he found himself without God, without man, without mind, without a permanent external world. All that remained after emptying himself of all mental furnishments and beliefs was the fact that he doubted. But he could not doubt without thinking. In the very act of doubting, he thought. If one thinks,

he must think something. The nearest something to the thinking subject is his own personal being. So he thought himself and concluded, "I think, therefore, I am." But he was not always; he began to be. So he must think of a being that caused him. The being that caused him must himself be uncaused. Moreover, there could not be an uncaused cause, without an effect. Creation, then, with which he stood face to face, was the effect of the great first cause. Thus Descartes' method, based upon the thought underlying doubt, led him, necessarily, to himself, the object of his thought; and to God, the cause of himself; and to creation, the effect of the great first cause or God. Through his process of coming at the problem, he was able, rationally, to believe in the existence of himself, the outer world, and God, the cause of both. Descartes, as a thinker, was affirmative, positive, con-

structive. He only doubted down to the point where he could doubt no longer, that he might have a sure foundation upon which to build. His contribution gave fresh courage and inspiration to the human mind. He failed to determine the boundary line between the self and the not-self, between mind and matter, between the thinker and the creation with which he stood face to face. This was the work Spinoza proposed for himself, and in the celebrated Ethics, published to the world at the peril of his life and soul, imagined the task mathematically performed. The two poles of Descartes' philosophy, the self and the not-self, he united in Descartes' cause, and named the whole sum substance. The self and the not-self reappeared as attributes of substance, which Spinoza named thought and extension. All the phenomena in the universe, mental or material, were but modes of the infinite substance. The

result of his thinking was pure pantheism. He reached a sort of mechanical unity, but he left no place for the affirmation of distinctions. His Ethics was large enough to accommodate everything, but in such a way as to preserve the individuality of nothing. A thought is valuable in proportion to its capacity to take hold of things as they are. The old opinion that heat was caloric, served as a working hypothesis for the mind a long time. In the view of those who held it, it was satisfactory and adequate. But it never really got hold of heat, because it contradicted the nature of heat. The astronomers thought, for a long time, that they had come into relations of knowledge with the stars through the Ptolemaic conception of the heavenly bodies. They were mistaken, however. Their theory did not fit the real celestial order at all. As a work of genius, Spinoza's Ethics is one of the most remarkable productions ever for-

mulated by the human intellect, but it conducted the mind away from truth, rather than into relations with it. Locke began his work as a philosopher, as Descartes began his, by looking into his own mind. Descartes began by casting out everything that could be doubted. Locke began by making an inventory of what his mind contained. Descartes wanted to find out how much he could know, as measured by what remained after throwing out everything that could be doubted. Locke sought to see how little he could know, by putting the sensations and impressions he found in his mind on the witness stand, and getting them to tell how they came to be there, and where they came from. Descartes began by a study of the intelligence, the instrument of knowledge. Locke began by a study of the facts which, by some means or other, had found their way into his intelligence. Descartes got rid of every

belief that could be doubted. Locke ran every idea out of his mind that had been imported from the outside world, in order that he might see if the mind had any constitutional power to produce any. Descartes, having dislodged all inherited beliefs, such as took for granted the existence of God, man, mind, and outer world, found some mental laws, capabilities, and tendencies left, which compelled a man, if he thought at all, to think in a given way; and if he thought on given lines, to think to a given conclusion. Not being able to get these laws out of the mind, he called them innate ideas. They were in the mind by structure and constitution.

After Locke had carefully examined the contents of his mind, he declared they were all imported from an outside realm. Nothing he found in the mind was indigenous to the soil. When all foreign importations were removed, noth-

ing remained but an empty vessel. The mind was nothing but a receptacle, into which the senses dumped such objects as they happened to find lying round loose in the outside world. It had no more power to understand or turn into thought what was brought in than a piece of white paper had to read and interpret what was written upon it; or than a kettle to recognize the liquid making up its contents as water. It is like a table of wax; any sort of letters may be graven upon it, but the table cannot read them.

Locke proposed to find out what the mind could know by counting and tabulating the things he found in his own intelligence. This is very much like trying to understand the nature of light, by considering the blue things and green things and red things the light discloses. All bodies, it is said, which the light enables us to see, attract each other in proportion to

their mass, and inversely as the squares of their distance. The law of gravity, which regulates the bodies light reveals to us, is not the law of light. We can never understand the nature of light, or the laws of light, by the study of things which light enables us to see. If all knowledge is but the sum of the impressions which the external world has made on the mind, then the cause of knowledge is matter, and knowledge is but the image or reflection of material things. Knowledge, then, would sustain the same relation to the outside world, that the shadow of a tree does to the tree. One would come as near lifting up the tree by its own shadow as lifting up the truth by Locke's system of sensational philosophy.

Impressions are simple, atomic. They come into the mind, one after another. They cohere in no unity. They are held together by no necessary relation. They

are separate, one from the other. If there is no primary, innate faculty; no abiding and indwelling mental activity, that lies behind, and determines and co-ordinates the objects which nature supplies through the senses, converting them into rational, orderly knowledge, then we can never get hold of truth. We are shut up to hopeless ignorance.

IV.

Berkeley, in order to escape the materialism to which Locke's philosophy led, accepted his theory of knowledge, but destroyed his outward, material world. In his view, there was no matter, nothing but ideas. The impressions conveyed through the senses into our minds are but reflections of the ideas of God.

In Hume, the empirical theory of knowing found a disciple who did not hesitate to affirm all that was involved in it.

Locke said there was an outward world, and knowledge was its image. Berkeley said there was no material world; that knowledge was the reflection of God's ideas. Hume said there was neither outer world nor inner; that there was nothing but impressions, sensations, ideas, in perpetual flow and flux. He claimed that all ideas which could not be resolved into impressions were false. He declared we could have no ideas of substance, because, if perceived by the eye, it must be a color; if by the ear, a sound; if by the palate, a taste. And because we could not think of substance as a color or a sound or a taste, we could therefore have no idea of it whatever. Belief in a permanent external world was rendered irrational by his theory of knowledge. Nothing is more vital and irrepressible than belief in one's own existence, but even this could not be retained in accordance with the teachings of

Hume's philosophy. "Whence," says he, "could the impression of the idea of self be derived? What impression could create this idea? This question it is impossible to answer without a manifest contradiction and absurdity, and yet it is a question that must necessarily be answered. For my part, when I enter most intimately into what I call myself, I always stumble upon some perception or other; heat or cold, light or shade, pain or pleasure. I cannot catch myself at any time without a perception, or observe anything but a perception. When my perceptions are removed at any time, as by sound sleep, so long am I insensible of myself, and may be said truly not to exist."

The sensational philosophy which promised so much, which appeared so eminently practical, that took to itself such an air of common sense as it got about obliterating innate ideas, was seen at length to be

utterly impotent. It corresponded with absolutely nothing in heaven or in earth. The very impressions it admitted, passed through it like drops of water out of a fisherman's net. Where the impressions came from or where they went to, it furnished no means of knowing. God and world and cause and law and self might be, but the human mind could never know whether they were or not. The human observer stood before a procession of images, sensations, perceptions going by like an unending circus troupe.

In Hume may be traced the entire breakdown of empirical philosophy as a method for getting at the truth. He recognized this himself. "When I turn my eye inward," he says, "I find nothing but doubt and ignorance." "The understanding, when it acts alone, and according to its most general principles, entirely subverts itself, and leaves not the lowest degree of evi-

dence in any proposition, either in philosophy or common life." "We have, therefore, no choice left, but betwixt a false reason and none at all."

VII.

The most remarkable thing in the whole search for truth, is that anybody after Hume should have attempted to find it with Hume's principles. Yet the two best known writers who have lived in England since Hume's day, have rested their dogmatic doctrines on the foundations laid by the sensational philosophers. Hume's impressions and ideas became John Stuart Mill's permanent possibilities of sensation and feeling, and Herbert Spencer's vivid and faint manifestations of the unknowable. In our time Herbert Spencer has undertaken the herculean task of explaining matter and mind, time and space, society and morals; of showing what they

are and what they are not, by the same principles which Hume himself demonstrated to be incapable of explaining anything. Spencer's units of knowledge are vivid and faint manifestations of the Unknown. How the unknowable remains unknown, after vividly and faintly manifesting itself, we are not told. Mr. Spencer's vivid and faint manifestations of the unknown are old aquaintances with new names.

Locke knew them as impressions and sensations. Berkeley recognized them as ideas of sense and imagination. John Stuart Mill was on speaking terms with them as permanent possibilities of sensation and feeling. Mr. Spencer gives them another baptism and another name. He calls them vivid and faint manifestations of the unknowable. While they have been changed in name, however, it must not be supposed that they have undergone any

change in nature or character. They stand apart, the one from the other, just the same as ever. They are just as foreign to the mind, where they vividly and faintly manifest themselves, as were the impressions of John Locke. They flare and flicker, rise and fall, like the jack-o'-lantern lights of legend and tale. One light is not of a piece with any other light. The lights follow one another in such quick succession, first vivid, then faint, that one cannot tell from the momentary flames and flashes what is intended to be advertised. That something is trying, by various pyrotechnic displays, to get itself revealed seems to be evident. But there is such hurry on the part of the something that makes the manifestations, such a disorderly whirl and changing of lights, that the observer is totally bewildered; and, being under the necessity of making some account to himself as to their meaning, concludes that they are vivid and

faint illuminations of the unknowable. Hume's procession of sensations and ideas has by Spencer been converted into the fire-works of the unknowable. With Hume's physiological theory, the mind could know nothing but its own sensations. Spencer's vivid and faint manifestations of the unknowable are equally as incapable of furnishing any rational basis for belief in mind or matter, law or cause, self or God. To ask the human mind to believe the encyclopedic, dogmatic system of philosophy he addressed to it, after insisting that all our knowledge is but the sum of vivid and faint manifestations of the unknowable, is as irrational as trying to build a cathedral on a London fog bank. Underneath every one of Spencer's general terms, the indestructibility of matter, the continuity of motion, the persistence of force, there is nothing but sensations, vivid or faint manifestations of the unknown.

"The doctrine of the indestructibility of matter," he says, "has now become a commonplace." "Matter never either comes into existence, or ceases to exist." How are we to know this, with minds incapable of any other knowledge except such as is made up of vivid and faint manifestations of the unknown? Who ever had a sensation or a manifestation of the indestructibility of matter? This is an idea involving all past time and all future time, and all the laws and forces by which matter is regulated and conserved. How could an image of the indestructibility of matter be photographed on the sensitive plate of the mind? To do this it would be necessary to compress all past time and all future time into one moment, and all matter into one single square inch or square yard of space, so that the impression of it could be made. To believe in the indestructibility of matter, with Mr. Spencer's theory of the

mind's capacity to know, is delirium and insanity. It is to believe in something that the mind, by its very nature, cannot even get an impression of. It is believing that the ocean can be carried in a thimble without any bottom. Any man who should utter this publicly, and sincerely, would be put in the insane asylum. He says again, "the very nature of the intelligence negatives the supposition that motion can be conceived (much less known) either to commence or to cease." The nature of the intelligence is such that all the knowledge it possesses is made up of sensations and manifestations of the unknown. How can the continuity of motion be conceived? To do this, we must have a conception of all past time and all future time. It is an idea as transcendent as the idea of God.

Mr. Spencer claims that the power the universe manifests to us is utterly inscrutable; that space and time are wholly

incomprehensible; that matter, in its ulti mate nature, is as absolutely incomprehensible as space and time; that all efforts to understand the essential nature of motion do but bring us to alternative absurdities of thought; that it is impossible to form any idea of force in itself, and equally impossible to comprehend either its mode of exercise or its law of variation; that we are unable to believe or to conceive that the duration of consciousness is infinite, and equally unable to know it as finite, or to conceive it as finite; and that the personality of which we are each conscious, and of which the existence is to each a fact beyond all others the most certain, yet is a thing which cannot truthfully be known at all: knowledge of it is forbidden by the very nature of thought. All this is perfectly consistent with his theory of knowledge. This is the point to which David Hume, his master, conducted the

human mind in its search for truth. But Spencer is not logical; he had a theory of being that contradicted his theory of knowing. So he reasons first one way and then another. He says, elsewhere in his First Principles, that common sense asserts the existence of a reality; that objective science proves that this reality cannot be what we think it; that subjective science shows why we cannot think of it as it is, and yet are compelled to think of it as existing; and that in this assertion of a reality utterly inscrutable in nature, religion finds an assertion essentially coinciding with her own. That we are compelled to regard every phenomenon as a manifestation of some power by which we are acted upon. That though omnipresence is unthinkable, yet as experience discloses no bounds to the diffusion of phenomena, we are unable to think of limits to the presence of this power, while the criti-

cisms of science teach us that this power is incomprehensible. Analyzing the above declarations, we find that Mr. Spencer knows there is an ultimate reality. Then it has being. It acts upon us. Then it has the attribute of action. All phenomena are manifestations of it. Then it has power. All phenomena are manifestations of an inscrutable power, by which we are acted upon. Then it has causal energy. We are unable to think of limits to the presence of this power. Then it is omnipresent. So the unknowable, inscrutable something has being, power, activity, causal energy, and omnipresence. But how are we to grasp these universal, transcendental attributes of the unknowable, with an intelligence incapable of receiving anything but simple, separate, unrelated, broken impressions and manifestations? It takes as much mind to believe in the unknowable, with the attributes of

power, activity, being, causal energy, and omnipresence, as to believe in a self-existent God, with the attributes of power, wisdom, justice, truth, and love.

Spencer's theory of knowing is destructive, while his theory of being is constructive and transcendental.

VIII.

The intelligence, as the organ of truth, must be large enough to find truth and contain truth. No sane man would undertake to dig down a mountain with a tooth-pick. Mr. Spencer devoted page after page to the discussion of cause, time, space, force, and ultimate reality, while holding a theory of knowledge that made the very thought of these inconceivable. The very things that he labeled as knowable contained a substrate the mind could never get at. Knowable things, then, could not be known as they were; hence if they were known at

all, must be known as they were not, which made the mind's knowledge error. All who accept Mr. Spencer's theory of knowledge are shut up to absolute ignorance or absolute error. If we are to know the truth of reality, of mind, of external existence, we must have knowing faculties up to the style of the truth we are to know. If we are to know light, we must have eyes capable of taking in the light, of analyzing it, and turning it into vision. The disposition to limit our power to know, by telling us, on the strength of Mansel and Hamilton and Kant, that all our knowledge is relative, is innocent enough when stripped of its seeming wisdom. It is true that we can know no more than our knowing faculties permit us.

We cannot know more than we can know. We are not absolute and omniscient as to our capacity to know. All we can see is what we can see with our eyes. We cannot see with our fingers or with the back

of our heads. All we can hear is what we can hear with our ears. We have no other organs with which to hear. All sounds that vibrate at the rate of sixteen times to the second up to thirty-eight thousand times to the second, we can hear. Whatsoever sounds vibrate at a lower rate than sixteen times to the second or at a higher rate than thirty-eight thousand times to the second, we cannot hear, because such sounds are not related to the ear. But the eye, being adjusted to and related to much finer wave lengths than the ear, can see waves that vibrate up as high as seven hundred and twenty-seven trillion times to the second. The eye cannot see waves shorter than seven hundred and twenty-seven trillion vibrations to the second, because such waves are not adjusted to the eye. The waves the ear cannot hear are not sound waves. The waves the eye cannot see are not light waves. There are no

sound waves in the universe the ear cannot hear, provided they are near enough to come into contact with it. There are no light waves in the universe that the eye cannot turn into vision, if they strike the retina. Are we going to fall out with the eye, and discredit the beauty it does see, because it is not as large as the rim of immensity, and cannot see everything disclosed by the light of suns and stars at once? Are we to hold the ear in contempt after it takes in the harmonies of Beethoven and Mozart, because it cannot hear all the music the stars are making as they move through the heavens?

Whatever is real and true the mind can know, because the mind is correlated to the real and the true. It cannot know what is unreal and untrue. It cannot know that two and two make five, because that is unreal and untrue. It cannot know that a crooked line is the shortest distance

between two points, because that is unknowable. It cannot know that it is more rational to tell a lie than to tell the truth, because that is unknowable and untrue. There is much that is unknowable, but whatever is, we may be sure is irrational and unreal. Whatever is true in being, cause, time, space, mind, matter, force, motion may be known. The finite mind cannot know it at once, and can never, throughout all infinite time, directly take it into the intelligence; but it is knowable, because the underlying, fundamental, prior thing in the universe is mind, the mind of the absolute and eternal One. All things are set in order and reason. The external universe is the expression of mind, and is therefore intelligible. The human intelligence is the expression of the same mind, and is therefore capable of grasping and turning into thought the intelligible order without.

According to the theory of Locke, Berkeley, Hume, Mill, and Spencer, any knowledge whatsoever is impossible. If the knowing subject and the knowable object, the two factors of knowledge, can only come together in a mechanical way, as basket and potatoes, kettle and water, paper and letters, then the very conditions of knowledge are denied, and we are shut up to blank, square ignorance.

Things come together to form knowledge, as things come together to form a tree, and not as house, calico, pins, lace, shoes, and blankets come together to form a store. An acorn is a living something. It is not a tree, but within itself are the germs of a tree. When grown, it may be said to have forms, as root, trunk, and branches. These were potentially and ideally contained in the acorn. But their realization and active expression involved a process, in which the ideal forms, tenden-

cies, and forces contained in germ in the acorn met and united with the elements of the outside world. Suppose we consider the acorn the subject, and the particles in soil and rain and atmosphere capable of making a tree as the object. What happens when an oak with all its beauty stands out upon the hillside? This, subject and object have come together in unity, in an organism. Suppose Locke should have undertaken the work of understanding how a tree came to be, instead of how knowledge came to be. We will say he began by analyzing a full grown tree. After thorough examination of its contents, he finds that all the parts of the tree, carbon, water, etc., are found outside of it in the external world.

He finds that the tree is composed of various atoms, all of which may be found in the soil and in the atmosphere. He concludes, then, that these atoms from soil

and atmosphere, began to move up to and down to the acorn. The acorn, passive meanwhile, lets them fall on it. So, of their own free will and accord, the atoms kept piling themselves upon the acorn, until in the process of a hundred years there was a tree. Now a brick column might be carried up after this fashion, but not a tree. The prior and fundamental thing in an oak tree is the acorn. It contains an active, organizing life principle. Falling into the soil, this folded life power begins to stir. It lays hold upon the elements about it, digests them, assimilates them, and turns them into an oak. The mind is to the raw material of knowledge, what the acorn is to the raw material of oak. Through the senses the raw material is conveyed into the mind. It is then appropriated, assimilated, digested, and turned into knowledge. The active, organizing, combining power that turns the raw material presented by the

senses into knowledge, does not come from the outside world. It is constitutional, fundamental, original. Just as the organic forces of the plant take up the elements from the outside environment upon which it subsists, so the synthesizing, living power of the mind takes the matter of sensation and turns it into the whole called knowledge. Knowledge is a unifying process. It combines the manifold into one. It reduces multiplicity to unity. All that is real and all that is true in the heavens above or in the earth below, in mind or in matter, in time or in space, in man or in external world, are capable of being reduced to unity in knowledge.

Knowledge is the subjective unity in the finite mind that corresponds to the objective unity that lies within the infinite mind. Nothing less than a universal synthesis satisfies the finite mind, because it is a copy of the infinite mind. The finite self-

consciousness is a copy of the infinite self-consciousness. The infinite mind knows all things at once; the finite mind comes to knowledge through a gradual process. It can never, through all eternity, know all the infinite mind knows, but it can eternally advance in knowledge, and comfort itself at every stage of the process with the thought that nothing in the mind of the infinite and absolute one is foreign to it, or in contradiction with its capacity to know. In thinking, the finite mind is at home in its father's realm, and because this realm stretches out illimitably every way should not oppress us or discourage us. For this the finite mind can know, that throughout the limitless domain of God there is order and truth and reality.

Thus standing face to face with truth, and being endowed with intellectual capacities capable of recognizing it, grasping it, in its unity and in its particulars, it is

proper to inquire the object and the purpose of it. It is the revelation which the infinite mind has made to the finite. It is the language of God, in which he has embodied his thought. It is the word of the universal spirit. Man is a spirit, and he is to grow and come to the full realization of himself by partaking of the word of God. Truth has been revealed for no other purpose than to make men. Sir William Hamilton represents truth as game, and the method of getting truth to a chase. He says the exercise of our powers involved in the process of getting truth is better than the game we seek. Lessings says, "If the Almighty, holding in one hand truth, and in the other search after truth, presented them to me and asked me which I would choose, with all humility, but without hesitation, I should say, give me search after truth."

Mallbranche says: "If I held truth captive, like a bird in my hand, I would let it

go again, that I might chase and capture it." Müller says: "Truth is the property of God alone. Search after truth belongs to man." Such sentiments indicate that the men who uttered them had no correct idea of the real nature of truth, or of man's intellectual nature, the necessary food of which is truth. It is true that the search after truth gives exercise and pleasure to the intellectual faculties, as search after bread gives exercise and health to the physical powers. But an eternal search for bread is not sufficient to keep man's body robust and strong. The very condition upon which he will be able to keep up the search for it is, that he regularly and steadily partake of it. A tree, had it intelligence and emotion, would, doubtless, enjoy wrestling with the storms, and throwing its roots into the earth and its branches into the heavens, making levies upon earth and sky for its own nourishment; but if it

did not constantly turn the elements it found into its trunk and branches, it would not be able to wrestle long with the storms, or forage long upon the earth and sky.

To claim that the intellectual faculties are always to search for truth, and that the search is better than the truth, is tacitly to assume that truth is not for them; or, if for them, and should ever be found, would be as useless as a poor, tired, half-dead fox overtaken by the hunters in the chase. Searching for truth is doing; partaking of truth is being. The search gives agility and skill; the partaking of truth gives wealth of character. To hunt game with no other object than that which comes from the sport of the chase is degrading. To shoot birds only for the purpose of seeing them fall is mean and wicked. So, to search for truth with no other purpose than that which comes from the exercise of the

search, is unworthy the intellect that was given, not only to find truth, but to grow rich and God-like by partaking of the truth.

Man's need for bread, we saw, led to the establishment of commerce, and commerce did far more than secure to man food and clothing and shelter. It brought men together and discovered themselves to themselves. Power lent itself to the uses of man's social nature, awakened and developed by commerce, and made it possible for men to come into relations with one another, not simply in states and nations, but on all the earth. The need for bread helped to the formation of society, the nature of power and the applications to which it lent itself widened the social domain into a universal brotherhood, to which man, as a spirit, was correlated. But many saw bread only in its relations to hunger, and power only in its relations to wealth and worldly dominion. So, many see in

truth no purpose except the practical and material ends to which it can be put. In the esteem of the utilitarians, it was well enough that learned men consecrated their genius and their industry to the study of the subtle subject of heat. It was well that they discovered the real nature of heat, and saw that it was not caloric, but a mode of motion. Because this opened the way for our railroads and steamboats and quick methods of transportation, which have contributed so much to the world's wealth. It was well that the impracticable and theoretical men, who had nothing better to do, spent ages studying the nature of electricity, and finally discovered that there were certain metals for which it had affinity, and that it had speed equal to thought itself. For these studies have enabled the practical and substantial men to order their corn and meat by telegraph, and the practical housewives to order their roast beef

by telephone. It is well that people who had no practical turn of mind spent years in considering the structure of the human frame, and the plants and minerals capable of ministering to it, for in this way the doctors have got ideas by which they are enabled to keep us practical men alive, so that we can trade longer, and build more factories and eat more victuals.

Now it is true that the knowledge the intelligence comes to by insight into the relations and nature and truth of things, can be turned to practical account. But the truth the mind finds by study was not primarily intended to open the way for steam cars and telegraphs and the production of wealth. These things are incidental. Truth is the provision God has made for the intellect. The knowledge of the stars has helped man to sail the sea and to take his bearings on any part of its surface. But the practical account to

which this knowledge has been turned is not to be compared, in value, to the effect it was intended to have on the human mind, strengthening it, ennobling it, and harmonizing it with the divine mind.

RIGHTEOUSNESS.

"While smitten with the fatal wanness of approaching doom, the flamboyant pleiad of the men of violence descends the steep slope to the gulf of devouring time: lo! at the other extremity of space, when the last cloud has but now faded in the deep sky of the future, azure forevermore, rises resplendent the sacred galaxy of the true stars—Orpheus, Hermes, Job, Homer, Æschylus, Isaiah, Ezekiel, Hippocrates, Phidias, Socrates, Sophocles, Plato, Aristotle, Archimedes, Euclid, Pythagoras, Lucretius, Plautus, Juvenal, Tacitus, Saint Paul, John of Patmos, Tertullian, Pelagius, Dante, Gutenberg, Joan of Arc, Christopher Columbus, Luther, Michael Angelo, Copernicus, Galileo, Rabelais, Calderon, Cervantes, Shakspere, Rembrandt, Kepler, Milton, Molière, Newton, Descartes, Kant, Piranesi, Beccari, Diderot, Beethoven, Fulton, Montgolfier, Washington: and the marvelous constellations, brighter from moment to moment, radiant as a tiara of celestial diamonds, shine in the clear horizon, and, as it rises, blends, with the boundless dawn of Jesus Christ."

CHAPTER IV.

THE PROVISION FOR THE MORAL NATURE OF MAN.

Two elements are essential to the process of thinking, the intellect and the truth. One is within, the other is without. The one is subjective, the other is objective. Two elements are also essential to the process of volition, the will and the right. The one within, the other without. The one subjective, the other objective. Before sight is possible, there must be an eye and there must be light. The one is within, the other is without. The one is subjective, the other is objective. Before hearing, there must be an ear and there must be sound. The one is within, the other is without. The one is subjec-

tive, the other is objective. Before breathing there must be lungs and there must be atmosphere. The one is within, the other is without. The one is subjective, the other is objective.

No definition of man is large enough to accommodate the facts of his nature, that does not embrace what he is without as well as what he is within, what he is objectively as well as what he is subjectively. It must not only embrace the intellect, but the truth which it thinks; not only the will, but the right which corresponds to it; not only the eye, but the light which gives it meaning; not only the ear, but the sound which matches it; not only the lungs, but the atmosphere to which they are correlated. Human nature is dually constituted, so that the larger half of itself is outside of itself.

Illustrations of the same duality of constitution may be found on a limited scale

in the organic and in the inorganic worlds. The greater half of the oak is not in the life germ of the acorn, but in the elements of the soil and the sky which environ it. The larger part of the fish is in the ocean which surrounds it. Most of the fuel which makes the heat in the grate is not in the carbon of the coal, but in the oxygen of the air which fills the room.

I.

The possession of a will and the capacity for choice make man a moral being. Man's will is bounded on every side by the laws of God. These laws are only another name for God's will. Man is made in God's image and has a will, as far as it goes, just like God's will.

By choosing to act and to move along the lines of law which gather from every whither about his will, he finds he can go somewhere, that he can leave the narrow,

provincial, and local neighborhood of ease and sense and subjection, and find his life in that broad realm of freedom, that belongs to him as a thinking and willing being.

At the termini of some railroads there are huge contrivances called turntables. They are constructed of immense timbers and balanced on pivots. They are large enough to accommodate the full length of a steam engine. Iron rails are laid across these tables, of the same size and the same distance apart as the rails which make up the lines of the main track. When the train comes in from the far interior, the engine is run out on one of these tables and turned round, so that the headlight faces the main track again. Before the engine is ready to leave the short track, however, the rails on the turntable must exactly correspond to the rails on the main road. Then the engineer pulls the

throttle, and the great locomotive rolls past the circumference of its pivoted and temporary resting place into commerce with the railways of the globe. Imagine railway lines coming together about such a revolving table from all the earth, so that an engine could pass from this circular platform toward any quarter of the globe, the only condition being that the short track on the table correspond to the rails of the long track on which it was proposed for the engine to run, and you have an illustration, which in some degree helps us to understand the relation of man's will to the laws of God.

Should the engineer undertake to get the engine from the table without reference to the lines upon which it was intended to run, we know very well what the consequences would be. He would not go far, and even the little distance he should manage to make would be attended

with tremendous bumping and friction. All movement would be in the direction of chaos and confusion. However great the expenditure of energy, no point would be reached, and the end of the undertaking would be waste and failure. If, on the other hand, we should imagine an engine on such a revolving plane, capable of making fifty miles an hour, with no tracks leaving it, we know it could not go anywhere, and besides there would be no reason for its being. It would be without meaning. Before the distance between one point and another can be passed by a train, two things are necessary, an engine and a railroad. The one may be called subjective, the other objective. The one implies the other. They are the necessary elements of transportation. As long as the train keeps to the iron rails laid for it, it moves without friction. It is only when the subjective element jumps the track

and essays to determine its own objective direction, that trouble comes. Then it is that cars are ditched and people killed or crippled. The laws of God run to and fro throughout the whole earth. They cross and recross every realm. They pass through every domain, physical, mental, and moral. They go straight through matter and straight through mind. They lead under the sea and over the sea and through the sea. Down through the earth and up through the air they may be noted, embracing with their invisible tracks every square inch of soil and sky. They insure the order of the universe, visible and invisible, tangible and intangible. They reach from globe to globe and make possible the commerce of the spheres. They run out into the infinitely great and back into the infinitely small, and bind in unity the atoms and the stars.

When man, by the aid of his reason,

discovers the truth of things, which is the provision for his intellect, these laws appear as provision for his will.

So truth and law, reality and righteousness, expressions of the thought and will of God, are the everlasting facts to which man is to adjust his intellect and will, if he is to cross the oceans, travel the continents, and claim the possessions which in the universe belong to him. If he misreads the facts, he will of course misread the laws which govern the facts, and will thus be unable to get facts or laws to serve him. But clearly seeing the truth of things, he is able to avail himself of the laws of things. As long as he only saw things in the lump, and looked upon the world as so much air and earth and fire and water, he missed the subtle laws which regulate the atomic and molecular structure of bodies, and failed to make them his servants. When, by the aid of

observation and experiment, he reduced the earth to its ultimate particles and came to such knowledge of it as corresponded to the facts of it; when he came to see the laws and drift of things, the tendencies and affinities of things; he had only to put the productions of his will in line with the way things were going, to have them serve him. Seeing that forces have power to do work in proportion to their energy of position, and applying this insight to the river with forty feet fall, he builds his mill beside it and thus utilizes it to grind his wheat. Seeing what soil and sunlight and rain can do when they combine to unwrap the life in a seed, he commits his wheat to their benevolent tendencies and gets a harvest of twenty bushels for every one he seems to lose. He studies fire. He sees it wrap in flame and level in an hour fortunes it took a lifetime to accumulate. He learns what a furious and

awful force it is. He gets insight into its real nature. He gets knowledge of it that corresponds to the reality of it. He sees that it is only a flaming and lurid method of movement. With the truth of it he gets the law of it. So by the aid of volition, put forth in accordance with intelligence, he contrives a machine corresponding to the laws of heat, as a mode of motion. In this way he utilizes the heat that burned up his cities, to transport him in ease and comfort over the country. He studies the stars until his knowledge of them corresponds to them as they are; along with this knowledge, he comes to an understanding of their laws, their uniform methods of action. Then he builds his great ships and commits them to the wild and storm-tossed sea, sure that his power to guide them will never fail as long as law and order remain in the heavens.

That there is a natural order, with cer-

tain inhering laws, men readily accept. That this order has the consistency of being developed in one way; that there is a dip to things that must be followed; that there is a clew, in accordance with which things may be worked; that there is a trend, drift, and law of things that must be accepted and followed; all this, men readily assent to. They do not attempt to farm the Sahara Desert, for they know the conditions of harvests are not there. They do not put out orange groves in Minnesota, nor plant cotton in Canada, nor sow rice in British Columbia. They do not expect the soil that spews up the ice to produce watermelons at the same time. They do not pretend to navigate ships over the continents, and to lay their railway lines on the surface of the sea. They fix their telegraph wires to poles by means of little glass contrivances, and never attempt to send electricity through the grape vine.

Natural laws they know inhere in the facts of nature, and are not read into earth and rock and river and atmosphere. They know that necessary laws reside in the facts of condition, and that they must study these laws to know the line of practical work they require. In building a house of stone they know it is necessary to defer to the law of gravity, that this law cannot be ignored or set aside, so they carry up the edifice in such conformity to rule and line as that the center of gravity falls in a line inside the base. They might prefer a house built with reference to a different order of things, one in which the center of gravity would fall in a line outside the base. But it is very well understood among men that the law of gravity must be respected. Even anarchists and nihilists, who seem to have irrepressible antipathy for all ancient orders and laws and establishments, do condescend sufficiently to respect the time-

honored, even if slightly belated, laws of gravity.

II.

The time was when men accepted the existence of a moral order with the same implicit, unquestioned confidence, that all men to-day accept the existence of a natural order. In Homer's Themistes we have an illustration of this confidence. The very word by which the decision of a judge is described attributes it to Themis, the invisible embodiment of justice. Thus the judge is but the channel through which the decision passes from the unseen moral order into the Greek court of justice. The judge is not respected because he has authority to make the decision, but because his vocation makes him the vehicle through which the decision of a higher power is rendered. Moses said to the people of Israel, "Thou shalt not lie," "Thou shalt not steal," "Thou shalt not commit adultery," but

these were not his words simply, but the words through which a moral order was interpreted. The solemn and awful import given to these commands did not arise from the vehicle through which they passed into the Hebrew social order, but from the fact that they inhered in the very constitution of man as a social being, and when they were uttered, they were felt to come from the God who fashioned man's life and set him in communities and states. They had the same sort of authority in the moral realm that the declarations of Newton, concerning the power of gravity, had in the natural. Newton did not conceive in his own brain the laws of gravity, he saw them and formulated them. Nor did Moses create the Ten Commandments, he saw them and interpreted them. The laws of gravity were transcripts from the will of God concerning matter, the Ten Commandments were transcripts from the will of

God concerning men. When natural bodies come together, it would be found that they always attracted each other in proportion to their mass and inversely as the squares of their distance. When men come together, it would always be found, that if they were to live together in harmony and health; if they were to advance and get above the planes of the brutes and the savages; they must abstain from lying, and stealing, and adultery, and thus be truthful, and honest, and virtuous.

The laws of gravity were not arbitrary rules, ordained to oppress suns and systems without rhyme or reason. Order of some sort had to be preserved among the millions of blazing, rolling worlds. Nor were the Ten Commandments arbitrary lines of conduct imposed upon men at the pleasure of a great, omnipotent tyrant. Men could not live apart, out of touch and contact with one another. Thus liv-

ing, they were lower than the beasts that perish. They could not live together without rules of some sort to regulate their lives. And laws which looked to the preservation of truthfulness, honesty, and virtue, were thought better than laws which looked to the production of lying, dishonesty, and adultery.

Because of the impetus given to the studies of material science within recent years, by the discoveries of scholars, the attention of men has been directed to the objects of the natural world and the laws which regulate them. Discoveries into the nature of heat, light, etc., has had the same effect upon the human mind that the discoveries of the gold fields in the West had upon the people of America in the early days. People abandoned fields and shops and stores and went in search for gold. The attention of the civilized world has in this generation been directed to the

consideration of outward facts. There has been promise here of earthly fortune. Conviction as to the existence of a moral order with its rewards and penalties is not so deep and abiding as it once was among English speaking people. But it is well to remember that the moral laws of the universe have not in the meantime been suspended, because men have not seen proper to consider them and to act with reference to them. They are just as real and as unfailing as ever. When accepted and followed, their presence is seen in health, in political stability, in intellectual progress. When ignored and forgotten, their presence is seen in disease, in political corruption, in mental stupidity, in sham and emptiness. In one way or another they always manage to get in their work. They never sleep, they never tire, they are eternally present to bless or to curse, to lift up or to cast down. They

get round to every man's home, and sooner or later to every man's life, bearing honor or dishonor, legitimate reward or righteous infamy. They are not to be bribed, whitewashed, or bulldozed; they come clean, unvarnished, and unveneered to posit their labels on every man's character; and whatever is read on the label, absolutely defines the content. Irrespective of money, titles, place, or rank, they come. The president in his seat, the judge on his bench, the preacher in his pulpit, cannot escape. If the president gets labeled pigmy, pigmy he is. If the judge gets classified fraud, fraud he is. If the preacher gets down as trimmer and sham, trimmer and sham he is.

III.

How are we to find moral laws? Just as we find natural laws. When we find the truth of natural bodies, reason sees the laws which inhere in them, and prudence dic-

tates such action on our part as these laws require. When we come to truth, on the moral plane, or to such knowledge of the facts as corresponds to the truth, reason, unless perverted, sees the laws that reside in them, and conscience dictates that these laws should be obeyed. Conscience unerringly and infallibly approves the right. By the aid of the light which is thrown upon it when the intellect comes into relations of knowledge with moral truth, it recognizes the laws the will ought to follow. These laws make up a part of the truth. Before the right can be recognized, the truth must be seen. When that which the intelligence takes for truth is not the truth, the conscience will recognize laws for the will to follow that do not correspond to the laws of God. It has often happened that what the intelligence took for truth did not correspond to objective reality, and hence was not the truth; hence the conscience has often

approved and suggested lines of action that were at variance with that which was essentially and eternally right. Those who followed the dictates of conscience, however, under such conditions, did, under the circumstances, right. To have refused to follow conscience would have increased their confusion. A man in the bog, with the certainty of death before him, ought to follow the guide that appears, even though he should not know how to lead him out of the swamp. Conscience never fails to come as near recognizing the right as the intellect comes to discovering the truth. When that which the intellect apprehends as truth corresponds to objective reality, we may be sure that the laws which inhere in it, and which conscience suggests as the ones the will ought to follow, correspond to the laws of God. One's conscience may lead him wrong, but only when the intellect has led him wrong. St. Paul's conscience led him

wrong when it impelled him to persecute the Christians of the early church, but it was because that which he held for truth did not tally with the outward facts, and hence was not the truth. Had the supposed truth which he held while persecuting the Christians been real truth, then in persecuting the Christians he would have done right. The reversal of conscience resulted from the incoming of new truth, or such knowledge as was sustained by the outward facts. The conscience of the Hindoo mother that leads her to throw her child into the River Ganges is as good as the conscience of the Christian mother that leads her to carry her child to the Sunday school. The trouble with the Hindoo mother is not with her conscience, but with her religious knowledge; it does not correspond to the facts of the order of the moral and spiritual universe. We are to determine the value of the affirmations of conscience by deter-

mining the value of the knowledge out of which those affirmations grow. Knowledge is valuable in proportion to its correspondence with that which is real. As often as the intellect grasps the truth, the conscience will suggest the right that accompanies it. There is no truth of a moral nature that has not its attendant right.

IV.

We know the moral truth as we know material truth, through its relations. Relation makes the difference between chaos and cosmos. To define any natural object is to place it in its relations. We could not define oxygen without naming the elements to which it is related. To take it out of relation is to take from it any meaning. Error is wrong relation. When the mind assigns a place to an object other than that which really belongs to it, in the order of which it forms a part, we call this error.

If, seeing the parts of a house scattered over a field by a storm, we should confound a sleeper with a rafter, we should take it from its proper place and take away its meaning as a part of the building. All of our knowledge is of relations and not of sensations, as Hume taught. Sensations set the mind to classifying and comparing, and the knowledge it comes to is of relations. Take the sensations the mind has when a red object is presented to the eye. Does not the mind begin at once to distinguish this sensation as one of redness from other sensations that are of different colors?

Is not its reality as a particular color constituted for us by its relation to colors, by its place in the scale of colors? If there was but one color, and that color the one we now know as red, how could we know it as such? How could we call it red unless to distinguish it from some other color with

which we, for the time being, compared it or contrasted it? So true is it that reality is constituted for us by the sum of its relations, that if the relations of things are maintained, no increase or diminution of the quantity of things related will be detected in our knowledge of them. If the earth were compressed into a sphere no larger than a marble, no one could know it if the relations among the objects which make it up were the same.

Again, the earth might be enlarged until it should be a billion times larger than what it is; yet this could not be known as long as men and gates and spoons and saucers and houses and cuff-buttons were enlarged in the same proportion. The leaf of a man's dining table might be ten miles square, and the ball of butter on his table as big as the Stone Mountain in Georgia; yet if cook, and cat, and stove, and water-bucket were increased in the

same ratio, he would not recognize any difference.

V.

We enter the world of humanity, which is the realm of morality, through the family. Here we open our eyes to the light, and here we have the first intimations of truth, which is provision for the intellect, and of righteousness, which is provision for the will. The truth of the family is the sum of the relations which subsist among the members of it. The family consists, we will say, of father and mother, and children. Here is a man and a woman, then, bound together by the relation of marriage. The children are related to the parents as offspring. The children are related to one another as brothers and sisters. Altogether they are one and they are many. There is unity and there is difference. In the relations implied in the names husband and wife,

father and mother, parents and children, brothers and sisters, we have the truth of the family. We know the family and can only know the family through these relations. Take the relations away, and you take the family away. There cannot be a husband without a wife, a father without a mother, parents without children, and children without a father and a mother. Abiding in these relations, which make up the truth of the family, wrapt up with them and growing out of them, are the laws of right which the will is to obey. The relation of marriage is accompanied by certain obligations and duties which husband and wife are to observe. These obligations and duties are divine laws, because marriage is a divine relation. The relations involved in the term parents, are attended by certain necessary laws the father and the mother are to observe with reference to children. The names of child,

brother, sister, imply relations that in turn imply laws the child is to follow with reference to parents, and brothers and sisters are to regard with reference to one another. These laws, which grow out of the relations which constitute the family, are not arbitrary, artificial, or accidental. They have not been formed by the opinions of men, nor formulated in the legislative assemblies of men. Legislative bodies have, perhaps, confirmed them and reproduced them in statutes, but this was not to create, but to transcribe what was already present. The laws with reference to which the members of a family find themselves placed are as essential and constitutional as the laws governing natural objects, which we define when we say bodies attract each other in proportion to their mass and inversely as the squares of their distance. These are subtle and invisible principles which cannot be read

out of rocks and logs and moons and suns. Displace rocks and logs and suns and moons, and the apparent power of these laws would not be seen, but upon the appearance of the natural objects, they would be immediately grasped and dominated by the power of the laws.

We pass from the family into the school. Here again we find laws already laid for the will to follow. They grow out of the truth, constitutive of the school, and this truth is made up of the relations subsisting among the members of the school. There are teachers, whose duty it is to control and to instruct. There are children, whose duty it is to learn and obey. The school is an institution, the object of which is to lead young minds into a knowledge of the earth, its continents, seas, rivers, and mountains; into a knowledge of language, its structure, uses, and the meaning of its terms; into a knowledge of

humanity, its races, governments, and religions. If children are to share in the benefits of the object for which the school is established, they must observe the laws which inhere in the very constitution of it.

They must obey the teacher, they must study the books, they must be polite, forbearing and kind to one another. It often happens that a child enters the school and refuses to follow the laws that reside in the structure and purpose of the school. He is willful and conceited, and thinks his own way better than the necessary and essential way ordained for him. He has the same sort of experience the engineer has who attempts to run his engine from the turntable, without reference to the railway lines laid for it. There is friction and trouble. Various methods of punishment are resorted to with the view to get his will to move along the lines laid for it. If rebuke and punishment fail, then he is

turned out, to attempt the stupid and insane experiment of getting himself through the world without reference to the laws fixed for his will to obey. Of course he does not go far. He turns up sooner or later in the jail, the hospital, the penitentiary, or the poorhouse.

Leaving the school, we find ourselves citizens of the state, members of society. But we do not go into society like an axman in a frontier forest to clear a place for his house, his fence, and his field. Methods of conduct are already prescribed, lines of action are alread fixed, and the laws which claim our obedience are already formulated. Society is an organism of mutually dependent members; the object of it is the equity of all, the welfare of all, and the liberty of all. Equity, liberty, welfare do not come by accident. Men cannot reach them out of touch and contact with one another. They are only possible to men living to-

gether, and only possible in conformity with certain conditions, and in the observance of certain laws. These laws lie folded in the nature of men as social beings. They are fundamental, and Aristotle saw them when he said, "man is by nature a political animal." The germs of government and law are in the depths of every man's being, as the germs of the oak are in the acorn. Wise men, living in society, have seen the truth of society, made up of the relations subsisting among people living together. Accompanying these relations, and counterparts of them, they have discovered the laws necessary to insure the equity, liberty, and welfare of all. These laws have been embodied in constitutions, enactments, and statutes. To carry out these laws and to make them prevail, certain institutions have been established, a body of men whose duty it is to execute the laws, a Judiciary, whose duty it is to interpret and expound

the laws, and a legislative body, whose duty it is to repeal old laws that did not work well, and to frame new laws to meet the exigencies of new conditions. To protect the rights of all, certain penalties have been made to accompany the violations of laws. To make these penalties real, and to inflict them upon the proper parties, courts and jails and penitentiaries have been established.

So we see, as the acorn cannot grow without appropriating the elements already prepared for it in the soil and the sky; and as the carbon cannot burn without laying hold of the oxygen already existing for it in the atmosphere of the room; and as the fish cannot swim without utilizing the water already adjusted to its fins; so man cannot fill out the possibilities of his being without obeying the laws he finds already ordained for his will, when he comes into the world. These laws converge about

his will in the home where he first sees the light, and are always deducible from the particular relations in which, at any time, his moral life is placed. They are as real as the laws of heat and motion and gravity. They run out from the home through the school, and from the school through all the continents of the social realm. They grow out of the truth of the facts of the family, the school, and society. They are as fundamental, necessary, and divine as the family, the school, and society. By observing them, man is able to turn into his character the tenderness of the home, the learning of the school, and the resources of society.

VI.

The authority of the laws which govern society is not found in the fact that the laws have been made by the will of the majority, or the will of the minority, or by the will of a king, or by the wills of any

or all of the people; but because they are founded in the constitution of human nature. The basis for the constitution of human nature is the mind of God, who created man in his own image. Social laws have authority, then, because they are consonant with the nature of man, and have their source in the will of God.

It is easy to show, however, from the records of history, that nations have often lived under laws imposed upon them that contradicted every principle of human nature. Men were accustomed once to find the laws of society as well as the laws of nature, not from the study of men, or from the study of the objects of nature, but in the depths of their own imaginations. In former times men met in convention and council and determined by resolution the shape of the earth and the sun's method of movement. They also subjected themselves to the criticism of posterity by cut-

ting the heads of the people off who did not agree with them. But it gradually dawned on the human mind that to find out for certain the shape of the earth it might be well to devote a little study to the earth itself. Thus it happened that in the course of events men ceased to read laws into God's material universe from the boundless realms of their fancy and conceit, and fell upon the more rational habit of taking the laws that were already there. Herein is the difference between mediæval and modern times.

The disposition to read laws into nature, without reference to the facts of nature, was in line with the programme to read laws into the social realm without reference to the facts of human nature. The laws of astronomy to-day are such as have been found by a study of the stars. The laws of chemistry are such as have been found by a study of the atomic structures of bodies. One

might fall out now with the celestial laws of Ptolemy, and head a movement to set them aside. But it is not rational to fall out with the astronomical laws of Norman Lockyer, for that is to buck against the sun, and to make faces at the stars. Lockyer's laws came straight to him from the skies, and find their value and verification in the close calculation of every steamer that sails on the wide, restless sea. The laws of civilized nations to-day are such as have been found by a study of the facts of human nature. To quarrel with them is to set one's self against the way man is built. It would not do to say that the social laws of civilized peoples to-day are exact transcripts from the will of God concerning the conduct of social life. Men do not now, and perhaps will not for a long time, read aright the facts of human nature. One thing is certain, however: in the making of laws among civilized,

republican peoples, reference is had to the facts of human nature, and not to the fancy of those who wish to govern. It cannot be disputed that the right facts are considered from which to make deductions. This means a complete change of front in the modern world over the ages past. There are doubtless many minor laws on the statute books of the liberal and progressive nations of the earth to-day which are not in accordance with the nature of man; but it seems that any rational person is compelled to admit that the great legal trunk-lines conform to the essential laws of human nature. Take the Constitution of the United States. Some one has said that the apple from which Newton deduced the laws of gravity was two thousand years falling. He would have been nearer the truth if he had said six thousand years. The Constitution of the United States is as clearly a deduction

from the facts of human nature, as were the laws of gravity from a study of falling bodies. The convention that met in Philadelphia to frame the Constitution of the United States, in 1787, was called to order on the top of the centuries. The members had such advantage of position as made it possible for them to look all down the ages. They were in a position to see all sides of human nature, under all forms of government.

In the preamble to the Constitution, they specified certain objects for which, in their esteem, this government should be formed —union, domestic tranquillity, justice, liberty, welfare. Any government constituted by a document like that has for the basis of its existence the facts of human nature, as really as the law of gravity has for the basis of its existence the facts of the stars

VII.

If it is necessary that man grasp the truth of things before he can determine the laws of things, we cannot fail to see how important it is that he have a proper theory of knowledge.

Man's idea of law will correspond to his theory of knowledge. When the French people accepted Locke's theory of knowing they immediately applied it to the laws, establishments, and institutions of the nation. They concluded logically, if all knowledge is of sensations, then there can be no authority for the belief in God, the immortality of the soul, or the divinity of law. These are universal and transcendent facts, but the mind has no capacity to know universal or transcendent facts. So society was to be dissolved into its constituent atoms, in order that individuals could arrange their lives on a universal, go-as-you-

please principle. All existing laws and institutions were to be obliterated. Everything that was up was to be put down. There are to-day, scattered through the civilized states of Europe and in some parts of the United States, men who want to emancipate the people from the dominion of all authority. All this grows out of the fashionable and sensational theory of knowledge taught first by John Locke and David Hume, and within recent years by John Stuart Mill and Herbert Spencer. Here is the source of anarchy. There is not an influential anarchist in the world, but is one upon the basis of the physiological theory of knowledge. There is no objective reality, but such as is composed of material atoms. These have got their arrangement and collocations without the agency of any great co-ordinating mind. They come together in pairs and clusters and groups, by the aid of no power but

such as issues from the unknowable. A man is no more a criminal for killing people than is the Mississippi River for overflowing its banks and drowning people. Men are mere products of nature, and their thoughts are only secretions of the brain. Laws and institutions are just the brain deposits of animals we call men, as dams across rivers and cells in gums are the deposits of the brains of beavers and bees.

In a document found on the person of a recent anarchist arrested by the authorities in England, it is asserted that the purpose of the anarchists is to put down all political, religious, and military authority; to burn all churches, palaces, soldier-barracks, fortresses, provisions, and to destroy all that has lived till now by business-work without contributing to it. From such documents we are to understand that the anarchists take it for granted that all laws and institutions among civilized peoples

have been imposed arbitrarily by those who govern upon those who are governed; that the parties to be governed have as much right to ignore them as the governing parties had to make them; that there is in the universe no moral order to which the political and social orders among men correspond; that every man has the privilege of setting up his own order; that every engineer has the right to ignore the rails laid for the flanges of his wheels on the long roads leading out from the turntable, and the inestimable subjective liberty of pulling open the throttle valve and running out into the country according to his own sweet will. Suppose all the anarchists in the world should be sent to some great island so that they could test their own theories, would they not be under the necessity of founding some sort of a government? They would have to construct roads, devise ways and means for lights,

water, and for protection against individual violence. Would they not have to bind themselves together by some kind of social contract, or compact? If a number of men should unite themselves into a syndicate for the purpose of building houses without reference to the laws of gravity, if they should declare it as their set purpose to so build houses as that the center of gravity should fall in a line outside the base, the whole company would be tried for lunacy and confined in the insane asylum. So the most summary and straightforward methods should be adopted for ridding society of all that class of men who propose to manage human affairs without reference to the facts of man's nature and the laws of the universe. It is a question whether they should be put into an insane asylum or into a jail, for it is hard to determine which they have the most of: insane stupidity or insane meanness.

Society has made great advances, but every increment of progress has been along the lines of the eternal laws of the universe. Those laws were here before man appeared upon the stage of action; they will be here when he is gone. Men may doctor themselves with error about truth, and error about right, until they come to be great imbeciles; but the truth and the right will remain clear and immortal for the intellect and the will of the wise and the good.

VIII.

It is important, as never before, for those who see the truth and recognize the right to declare the same with all authority. It is said that the Emperor Henry IV. stood shivering two whole days and nights in the snows of the courtyard of Canossa Castle, suing piteously for permission to throw himself, in agonized submission, at the feet of Hildebrand. That he was shunned by

his subjects more absolutely because of the ban that was upon him than he would have been had he been afflicted with the smallpox. This incident illustrates for us the authority wielded by the Church of the Middle Ages. The Church was then felt to be in touch with tremendous power. Its fulminations carried terror to the hearts of kings and subjects. What the Church declared should be done, or should be left undone, the people felt could only be disregarded at the peril of all hope for time and eternity. It not only declared the duties men were under the necessity of observing in order to save their souls, but the kind of thoughts men were under the necessity of thinking concerning the shape of the earth, the movements of the stars, and the structure of the human body, in order to save themselves from the odium of heresy. The Church reigned without a rival in all the civilized world. She was

not expected to give any reason for her actions or her utterances. When she determined what the order of the solar system was, the brains of men were compelled, without question, to acquiesce. Even to doubt was to deny the faith. The Church dictated the policy of the stars without being at the trouble of studying the stars; and no other sidereal opinions were tolerated but such as she formulated and published.

But the minds of scholars and students, in different parts of Europe, began to reach other conclusions concerning the nature and order of things than such as had been ecclesiastically settled for them. Copernicus saw that the heavenly bodies did not move in accordance with the teachings of the Church. And when the Venetian scholars looked through the telescope of Galileo at Padua, and saw Jupiter and his satellites, a central sun and revolving planets, the

authority of the Church on the subject of astronomy was gone. In this way the Church has been forced to give up one position after another. The people, seeing she had no foundation for the opinions she held concerning nature, began to question the value of her opinions concerning God, and heaven and hell, and right and wrong.

Now the Church must regain her note of authority. She must do this by seeing what the laws are which grow out of the facts of condition. The laws of the family are to be deduced from the truths of relation which constitute the family. These will be seen to coincide with the old laws uttered from Sinai. The laws of society are to be deduced from the truths of relation which constitute society. These, it will be seen, are summed up as was said of old in the formula, "Thou shalt love thy neighbor as thyself." When men get through framing laws for the regulation of

human conduct, from a study of the facts of human nature, they will find to their amazement that they have reinstated the Ten Commandments, and that Sinai is not a burnt out volcano. They will find that the Ten Commandments are still the foundations of social health, and harmony, and progress. God wrote them for Moses on tables of stone because he had already written them in the nature of man. The laws of gravity can no more be read out of the world of space than the Eternal Decalogue can be read out of the world of human life. So the man of law should speak with the same authority as the man of science, without apology and without misgivings.

BEAUTY.

"If the endeavor to analyze the world is a trifle, it is because the world is such. The sum of things can have no second intention, nor can it be characterized by any trait that is not included in itself. Some things are sweet, but what is our sense which perceives them ; some things are good, but what is our conscience which judges them ; some things are true, but what is our intellect which argues them ; some things are deep, but what is our reason which fathoms them? Everyone who thinks deeply, must have reflected that, if the purposes and results of man's practice are vanity, so also must be those of his speculation. Goethe said, that there was no refuge from virtues that were not our own, but in loving them ; and Ecclesiastes, that there was none from the vanity of life, but in fearing and obeying God. So, also, from the vanity of speculation there is no refuge but in acquiescing in its relative nature, and accepting truth for what it is."

CHAPTER V.

THE PROVISION FOR THE ÆSTHETIC NATURE OF MAN.

The glory of the mind is the possession of two eyes, the eye of sense and the eye of reason. Through the one, it looks out upon the world of matter and fact. Through the other, it beholds the world of idea and relation. The world of matter and fact, seen through the eye of sense, is lifted and transfigured and multiplied a thousandfold when contemplated through the eye of reason. When the literal world is transferred to the ideal world, it takes on hues and dimensions in accordance with the universal and illimitable nature of man. The world which the sense sees, and the world which the reason sees, are both real, and

through the mind commerce is kept up between them. Along this mental highway facts make a pilgrimage to the holy land of reason; there they are changed into ideas. Stars are turned into astronomy, atoms into chemistry, rocks into geology, plants into botany, colors into beauty and sounds into harmony.

Over the same royal road, ideas pass to the world of sense. There they are changed again into facts. Ideas of beauty, distilled in the alembic of the imagination from the seven prismatic colors, are turned into painting, and Raphael's "Transfiguration" blesses the world. Ideas of harmony, formed by the power of the imagination from the notes of the musical scale, are turned into song, and Handel's "Messiah" agitates the thoughts and feelings of men with the melody of the skies. Ideas of form, deduced from the contemplation of the shapes of things, are turned into sculpture, and

Michael Angelo's "Moses" augments the world's fund of conviction and courage. By changing facts into ideas, the mind gives us science. By changing ideas back to facts, it gives us art. Without science, life would be without bread; without art, it would be without ideals.

Science ministers to the body, art to the spirit. Men who go from things to ideas are practical; those who go from ideas back to things are the seers. Practical men conserve, but never venture. Seers throw the light of their genius into the dark beyond, disclosing new worlds for men. They are the leaders, they are in the vanguard of human progress.

By the possession of two eyes, the eye of sense and the eye of reason, man is placed into relation with two worlds.

The world he sees by the eye of sense is meager, limited, poverty-stricken. There are only a few houses in it, a little clump

of trees, a little patch of meadow, a horizon bounded by the curl of his cabin smoke. The world he sees by the eye of reason stretches far down into the twilight of the past, embracing all ages, all stages of progress, all empires and republics, all literature and peoples.

Through the eye of sense, he sees a world of hard limitation and fact. Through the eye of reason, a universe of ideas, visions, relations. Through the eye of sense, he sees a candle, with its flickering and passing flame. Through the eye of reason, he sees a kingdom of light, with truth and beauty, and love billowing away to infinity.

Through the eye of sense he sees a little mountain spring rise from the ground, to lose itself in the deepening shadows of the trees. Through the eye of reason he sees a river, clear as crystal, flowing forever from under the throne of God. A few violets and buttercups, covering with their

blue and their beauty a little strip of meadow, he sees through the eye of sense. The hills of day, numberless and immeasurable, covered with flowers, whose leaves never wither and whose beauty never fades, he sees through the eye of reason.

It is the conceit of those whose habit of mind is to look through the eye of sense alone, that they see more in the actual tangible world than those who are accustomed to look through the eye of reason as well as through the eye of sense. There never was a greater mistake. Those who see most in the world of mountain and sea and sky, are those who look most through the eye of reason into the world of idea, principle, and relation. Adams in England, and Leverrier in France, discovered Neptune, not by sweeping the heavens with their telescopes, but by careful ciphering in their studies. "Mr. Turner," said a friend to him one day, "I never see in nature the

glows and colors you put into your pictures." "Ah! don't you wish you could, though," was the painter's reply. In an apple's fall Newton sees the law of gravitation. Goethe sees in the sections of a deer's skull the spinal column modified. Emerson sings:

"Let me go where'er I will,
I hear a sky-born music still.
'Tis not in the stars alone,
Nor in the cups of budding flowers,
Nor in the red-breast's yellow tone,
Nor in the bow that smiles in showers;
But in the mud and scum of things,
There always, always something sings."

Humboldt habitually dwelt in the realm of principles and ideas. He spent only five years in America, and it took twelve quartos, and sixteen folios, and half a dozen helpers, and many years to put on record what he saw.

"The poem hangs on the berry bush,
When comes the poet's eye,
And the street is one long masquerade
When Shakspere passes by."

I.

Yet the mind must first see through the eye of sense, before it is capable of seeing through the eye of reason. The universe, that really belongs to the mind, the eye of sense never sees, but it sees something that suggests it. Through the eye of sense man takes in a few colors, but these suggest to Rubens the magnificent visions which illuminate the art galleries of Europe. Through the sense man hears a few notes, but these are taken and multiplied into the symphonies of Beethoven.

Through the eye of sense, Columbus sees a few pieces of driftwood brought to the shore by the waves of the ever-restless sea; but these help him, through the eye of reason, to see a new world with its virgin forests, its wide-reaching plains and its majestic mountain ranges. Agassiz sees through the eye of sense an indentation on

a rock in the State of Maine. This gives him a suggestion which helps him to see, through the eye of reason, the icebergs and the glaciers, which, in the early ages, ground their way to the south. The man of science sees through the eye of sense, only a bit of chalk; but from this a suggestion comes to him, which enables him to see through the eye of reason the oozy bed upon which the submarine cable rests; and the life that sported in the vast oceans when the Dover Cliffs were being formed. Through the eye of sense Cuvier sees an immense tooth, larger than any known at the present. Through the eye of reason he sees the huge animal in whose jaw it was set. Upon the comprehensive, active power of reason, man relies to determine for him the elements good for food, the power which serves his social nature, the truth which furnishes his intellect, the right which matches his will, and the

beauty which corresponds with his æsthetic nature.

The universe lends itself in its totality to the scale and the dip of the particular capacity or power through which man, for the time being, seeks to appropriate it. It stands before the sense of hunger in terms of bread. It stands before the social nature in terms of power. It stands before the intellect in terms of truth. It stands before the will in terms of law. It stands before the æsthetic nature in terms of beauty. The person who has related himself to the world through all the powers of his nature, finds it capable, by turns, of feeding every faculty with which he is endowed. The universe is now all bread, now all power, now all truth, now all law, and now all beauty. It will be any or all of these, according to the side, or sides, of himself through which he addresses it. One of the great discoveries of modern

times is the correlation of forces. The persistent force may express itself in heat, or light, or electricity, or magnetism. These are only different forms of the same thing, and any one may pass to any of the others. In the world, as a whole, we find the sense of correlation inheres, as it relates itself to the different faculties man has for taking hold of it. As the correlate of hunger, it is all bread; as the correlate of the social nature, it is all power; as the correlate of the intellect, it is all truth; as the correlate of the will, it is all law, and as the correlate of the æsthetic sense, it is all beauty. Objective reality is addressed to the many sides of human life, in order that the whole of it may be used up for the purpose of making a man. It is all to be drawn into manhood. As all rivers meet in the ocean, and all colors meet in the white ray of light; so objective reality, in all that it is for food, for power, for truth, for right, for

beauty; is to meet in human life, for nutriment, for furnishment, and for the completion of manhood. If you want to know what the objective self of the fish is, look at the ocean. If you want to know what the objective self of the eagle is, look at the sky. If you want to know what the objective self of the elephant is, look at the Asiatic jungle. If you want to know what the objective self of man is, look at the conditions of food, power, truth, law, and beauty which environ him. The fish gets the water, the bird gets the air, and the elephant gets the jungle; but man, with a nature illimitable, with capacities inexhaustible, with hunger deep as truth, with aspirations as wide as right, and with an ideal as unfathomable as beauty, is the child of the eternal God, and is to get the fullness of his nature in nothing less than the entire expression which God has made of himself in objective reality.

II.

All truth, as we have before stated, which man has tried to express, is but a transcript of divine truth. The truth of astronomy is a transcript from the reality of the stars. The truth of botany is a transcript from the reality of plants. The truth of geology is a transcript from the reality of the earth's structure. All right, which man has sought to embody in statutes, in constitutions, in enactments, is but a transcript from the will of God. So all beauty, which man has attempted to symbolize, is contained in the nature of things, and has its source in God. The beauty man has seen has taken in the process of history many forms. It is seen in architecture, sculpture, poetry, painting, and music. These are different forms of the same thing. As the persistent physical force expresses itself in heat, light, electric-

ity, and magnetism, so genius is the persistent mental force which expresses itself in art. Sometimes the persistent mental force comes to such unity and fullness in some massive soul that from him it goes out into all the fine arts. Michael Angelo was by turns poet, painter, sculptor, and architect. Had he lived in Germany in the time of Beethoven he would have added to his other accomplishments that of music. The noblest specimens of music are only great cathedrals constructed out of sound, as Michael Angelo's "Moses" was a great epic poem wrought in stone.

We wish to consider beauty in its relation to the æsthetic sense, in two aspects of itself.

The most important forms of beauty have as the physical conditions of their existence light and sound, and as the ideal conditions of their existence space and time. The names man gives to these forms of

beauty, when he expresses them, or re-expresses them, are painting and music. For no element of man's nature has more marvelous provision been made than for the æsthetic element. The objective conditions of the beauty, which correspond to the subjective æsthetic sense, are contained in sound and light. Sound and light are the invisible physical forces which play upon the objects of nature, and call from them the responses of melody and vision which the æsthetic nature appropriates for ecstasy and delight.

Capacity for sound is lodged in well-nigh all created objects. Minerals, woods, gases, and liquids even, contain the notes of the musical scale. Builders of pianos, harps, put no notes in the elements they use in the construction of these instruments. They simply comply with conditions necessary to bring them out. The music we get out of wood and steel and brass, as we

find them arranged in the piano, the organ, the harp, by striking them at regular intervals, is the melody breathed into them when they were created. Beethoven, Handel, and Mozart created no music. Their genius was manifested simply in the power to bring out of forest and mine and cane-brake what God put into them.

As to what note a body shall give up under tension and pressure, is owing to its ultimate structure, and the elements which compose it; and also the note latent in the object by which it is struck, or pressed. Sing into a piano and the same notes respond which are used in the execution of the song. A storm, howling through a forest, makes a loud noise, but no music. Its notes do not synchronize with those contained in the limbs and leaves of the trees. But when the low, sad murmur of the evening winds gently strike the needles of the long-leaf pine there is music. The notes of

the one are related to the notes of the other.

As all things have capacity for sound, so well-nigh all created things have capacity for color. The color which an object takes on in the presence of light is determined also by its ultimate structure and the elements which constitute it. Nearly every object absorbs a portion of the light and throws back to the eye of the beholder a portion. Bodies absorb those rays which are synchronous with their constituent elements. When the particles which compose a body are not capable of vibrating at the rate of any portion of the light particles, then they are all thrown back, and the body is pronounced white. It is to be observed that no body has color or sound of its own, but only the capacity for these. The note of a body is discovered by striking it, and its color by stimulating it with a light ray.

Another interesting fact is to be noted

here—that is the analogy between sound and light, or music and painting. The difference between a sound wave and a light wave is only a difference of length. The principles underlying them are the same, and the methods by which they are produced are the same. Sound waves, to be heard, must vibrate at least as often as sixteen beats to the second. Light waves, in order to pass through the organ of vision, and reach the retina of the eye, must not vibrate at a less rate than four hundred trillions of times to the second. The difference between the eye and the ear is, one is more refined than the other? A painting is a silent piece of music, and a piece of music is an audible picture. The notes of the musical scale and the colors of the prismatic scale are analogous. The distance between C and A of the musical scale is the same as the distance between red and orange of the prismatic scale. The notes of

the one scale may be translated into the colors of the other. Harmony of colors in a silk dress, would, if translated into their analogous notes, produce a piece of music that would be equally as pleasing to the ear as the colors are to the eye. Painting is only a more refined form of music. This is not fancy; it is mathematics and science. All things about us are capable of music, silent or audible. Notes belonging to some part of a great song are lodged in all created objects. Things are not measured off in continents, oceans, islands, mountains, forests, and mines only, but also in octaves. The music of the spheres is no longer a dream of the poets, but in accordance with exact science. The material system into which we are born is capable, then, not only of furnishing us food to eat and clothes to wear, but music and painting for the sense of the beautiful. A mere utilitarian, bread-and-butter philosophy does not ex-

haust the possibilities of even the material world. In its very construction respect to man's higher nature was had, as well as to his lower. By so much as music and harmony of color surpass in their subtlety and refinement the coarser elements necessary to sustain the lower nature; by so much has God emphasized the value of the higher nature. Had God intended his children for no higher plane than that upon which the animals live, and no greater future for them than that which belongs to "the beasts that perish," doubtless the beauty would have been left out. Men have been told, by one having authority, not to cast their pearls before swine. The beauty that was flung at the feet of man contained a message to a side of himself keyed to a radiant and imperishable realm.

Who does not feel, under the charm of music, or the influence of a great painting, reasons for high living which no words can

express? The tear which often gathers in the eye of the most abandoned, hardened man, under the power of song, bespeaks the fact that chords have been touched which vibrate responsive to no earthly interest or relation.

III.

The melody in sound and the harmony in color are correlated to the æsthetic nature of man through the ear and the eye. In the ear is found the musical scale, and in the eye the prismatic scale.

Notes are in the ear which correspond with the C D E F G A B of the musical scale, and parts are in the eye which correspond to the red, orange, yellow, green, blue, indigo, and violet of the prismatic scale. It is only through D in the ear that D out of the ear can be heard, and it is with C in the ear that C out of the ear is heard.

If there were no notes in the ear except

D, and all other notes in nature were destroyed, the ear could hear no notes at all. A hears A, and B hears B, and C hears C. What A hears, B does not hear, and what C hears, A does not hear. What is true of the ear is true of the eye. The parts of the eye with which red is seen are not the parts with which green is seen. Red in the eye sees red out of the eye. Blue in the eye sees blue out of the eye, and green in the eye sees green out of the eye. If there was in the prismatic scale located in the eye only the part with which blue is seen, no color in the world would be visible except the blue. The notes latent in all natural objects are addressed to the æsthetic sense, through the corresponding notes latent in the ear; and the seven colors, capacity for which is latent in all earthly objects, address themselves to the æsthetic nature through the corresponding capacities for color con-

tained in the eye. That man is related to the kingdom of beauty in a sense which marks him off from the animals below him, is proven by the fact that he can take the elements of this kingdom into his imagination and send them back to the realms of sense, in oratorios and paintings. The masters have given all history ideal and permanent setting by means of sound and light. Man cannot only see the truth, but repeat it; not only recognize the right, but conform to it, and not only appreciate beauty, but express it. In this he has the evidence of his kinship with the author of the true, the good, and the beautiful. The lower animals, as far as we know, may be thrilled with that which is beautiful; we do know they never repeat the beautiful. In the art galleries and conservatories of the world all the past is brought to life again and stands before the eye and the ear, under the ideal

forms of time and space. Moses is not only immortal in the laws which he wrote, and in the race which he civilized, but, through Michael Angelo's genius, he has been made eternal in the kingdom of beauty.

Thus, through his æsthetic side, man not only receives, but he gives. The melody of sound and the harmony of color not only come to him, but go from him; and from him, too, charged and shot through with all the suffering, temptation, sin, and sacrifice he has known.

IV.

The empirical philosophy, which reduces knowledge to sensations and morality to laws imposed by prudence, and man himself to the same plane of life occupied by the lower animals, invades the domain of æsthetics, and makes of beauty a mere matter of individual feeling, local conven-

tion, and arbitrary fashion. This philosophy of the dirt denies to mind any inherent, creative activity, in the region of knowledge, morals, or art. Now, it is doubtless true, that food and power and beauty of color and tone are addressed to the lower animals ; sufficiently, at least, for them to get the means of subsistence, and some low sort of pleasure from them. They do this, however, not by reason, but by instinct. The bee is determined by its nature to build his cell in accordance with mathematical principles, and to store it with honey from the leaves and the flowers. The bee does this as naturally as water runs down-hill. There is no calculation in it, and the bee does not recognize itself in the process of this work.

The bird may be determined in the selection of its mate by brilliant plumage, or joyous song, but this it does just as a rock

turned loose from the top of a house falls to the ground. The evidence of a combining, mental activity in man, to which things in the outside world are addressed, in a peculiar and distinct sense, is found in the fact that man not only receives the things that come to him, but sends them from him in the forms of his own thought.

The bee appropriates the honeydew that covers the surface of the leaves, stores it in his cell, and eats it in the winter; but who ever knew bees to plant out trees in order that there might be leaves from which to secure honeydew? Man finds the bananas that grow in the tropics, and the berries that grow in the temperate zones, and eats them; but he sees how bananas and berries grow, and so clears fields and hedges, to insure a more abundant crop.

The monkey hears the thunder and sees the lightning as well as the man, but man

investigates the nature of lightning; he sees the principle underlying its weird movements, the things for which it has affinity. So he contrives various methods for utilizing it. The mind within him being the same in kind as the mind which sends the lightning, he sees how lightning is sent, and sends it. He not only sees thunder-storms, but how they are made. So the professor creates them in glass jars for the benefit of his class.

Nature presents herself to man under uniform methods of action. Everywhere is regularity and orderliness. He reproduces this order in political and social life. The laws without him kindle into expression the moral magazine of volition within him.

Nature presents herself to man as unity. This implies mind. Unity is impossible without mind. The mind underneath the unity, without him, speaks to the mind

within him. Then by his own mind he recreates the universe in literature.

He hears the cawing of rooks, the cooing of doves, the purling of brooks, and the roar of tempests. These, with all other sounds in nature, are caught and combined in the marvelous creation of Mozart and Beethoven.

Much is said by the learned men who are ever seeking to minify man's place in nature, about the reason and memory, and intelligence, and even conscience of the lower animals. It is almost enough to make one wish he were a dog or a horse when he reads how much sense and how much conscience dogs and horses have. Not much weight, however, will ever be given to these long treatises on the intelligence of the lower animals, until some bee shall give us a book on mathematics, or until some horse shall tell through one of our agricultural journals the best time to

sow clover; or some dog shall give us the philosophy of the chase. We see the capacity of the human mind in Shakspere's plays. So one picture painted by a cat, one poem written by a mule, one philosophical dissertation composed by an owl, or one cocoanut plantation planted by the monkeys, would establish beyond question that the high claims made for the mental capabilities of these humble members of the animal creation are justified.

Man grows wheat by the use of the mind within him, which sees how the mind without him has made the growth of wheat possible. Man utilizes power, by the use of the mind within him, which recognizes how power is produced and controlled by the mind without him. Man sees truth, because the mind within him is like the mind without him, which expresses itself in truth. Man sees law, because the mind within him is like the

mind without him which ordained law. So man sees beauty, because the mind within him is like the mind without him, which expresses itself in beauty. Food, and truth, and law, and beauty, cannot be reproduced by man, except by the laws of mind acting in him as the laws of mind do without him.

V.

What is the use of beauty? Like truth and law, it looks beyond itself. It is to help realize the purpose for which the earth was created, the purpose which finds its consummation in a perfect man.

Beauty comes to man, bearing intimations of his high origin and also of his glorious destiny. Under the magic spell which beauty throws around him, he forgets for the time being his limitations, his fears, his doubts. He is lifted into a realm of universal freedom, where all dif-

ficulties disappear, where all conflicts are eliminated. The æsthetic nature is not at all seclusive and aristocratic. It receives the melody, and symmetry, and harmony which reason finds in the tones, and forms, and colors of the outside world, and turns over to it. These rich gifts are then shared with all other human powers and faculties. Hunger is served with food set in painted china. Around the table, where man satisfies his appetite, pictures are hung, and the beef market and the mill are built and arranged in accordance with the dictates of symmetry and taste. The college, where truth is taught, and the courthouse, where law is administered, are invested with all the beauty of the architect's genius. Thus beauty, high, heaven-born, and refreshing, is drawn into all the relations, and thrown around all the institutions of life. It reduces friction, redresses littleness, and adds to life good

cheer and depth. It smoothes the rough places, rounds the sharp corners, and hangs the bow of hope on the dark cloud of coming trial.

The æsthetic sense, nurtured on beauty, keeps before the minds of men and nations a proper ideal of life. When the ideal held before the mind at one period of advancement is reached, the æsthetic sense has already lifted another and a nobler, as far ahead of the actual as the first. In presenting to the living spirit ideals always in advance of actual attainment, the æsthetic nature opens the unending path of progress. It is incorrect to suppose that the ideal is worked out only in painting, symphony, or cathedral. Its presence is manifest in the useful, as well as the fine arts. The ideal often gets itself translated into the heal of a shoe, into the crown of a hat, into the wheel of a wagon, into the fence around the field, and into the structure of

the mower and the reaper. It curves in the arches of bridges, echoes in the sound of the hammer, and breaks over the hills in the whistle of the engine.

The progress of beauty in modern times has not been in the direction of form or coloring or symmetry, simply, but toward wider distribution. In early times, its ministry was to kings and scholars; it has advanced by expanding. The pyramid of Gizeh, the most expensive monument ever seen, was reared to perpetuate the memory of a great Egyptian king. A country was drained of revenue and of life to regale the pride of one man. The Parthenon ministered to a few great men in Greece. The cathedrals of the middle ages blest and helped a wider circle. But it was left to the time which is ours to build churches and chapels, as broad in their aims and ministry as the life of humanity. The early poetry concerned itself about the

wars of gods and the contentions of kings. But as the sacredness of human life came to be seen more and more, did it tend to catch within the sweep of its rhythm the incidents and traditions and loves of the common people. The ideal in our day is being worked out in fields of waving grain, into the cattle upon the hills, into the homes of the people. It is being turned into orchards and vineyards. It is being traced in vines and flowers over the poor man's cottage. The ideals were once housed and confined in the museums; now they are being turned out into the street. It was once the custom to bring Venus and Diana, by the aid of the chisel, from rough marble. The tendency now is to put the beauty of Venus and the enterprise of Diana into the spirits of our women. Sublime conceptions were once mainly realized in temples and cathedrals, but now we would see them distributed

into dwellings for families, into schools for children, and into churches for the true worship of God. We would see them in bridges spanning all the rivers, in mills grinding the people's bread, in factories spinning their clothes, and in railroads transporting their products. We would see them lifted into an asylum for the blind, a shelter for the orphan, and a home for the aged and infirm. We would hear them in the whirl of the spindle, in the ring of the hammer, in the splash of the paddle, and in the sound of the flying train. We would hear them in the steady march of progress, and in the pulse-beats of the happy plowman. Beauty is to be used to stimulate human courage, to embellish human spirit, and to enlarge human thought. Life's shadows are to be chased by the light of eternity's day, and its tumult hushed by the repose of eternity's harmony. The æsthetic element in man's nature was

appointed to receive the beauty provided for it. But it was to be God's almoner; having received it, also freely to give it. Thus it was to be the power whose function should be to put the whole of life into terms of harmony. Bernard Palissy put his ideal into a white enamel for his pottery; Columbus worked his ideal into a new world; Morse left his in the electric telegraph; Cyrus W. Field turned his into the submarine cable; and Thomas A. Edison has given his to the world in the telephone. It is not to be inferred, however, that those who work their ideals out in the useful arts contribute more to the making of men than those who express their ideals in poetry, painting, sculpture, or music. The tendency of beauty to get down into the ordinary work and relations of life is an intimation that all life should be beautiful in itself, and in all expressions which it makes of itself. The æsthetic sense is the

badge of man's royalty. A tutor was once employed to teach the son of a king. The young prince was sometimes disobedient. But in the esteem of the tutor, it was not quite proper to whip the son of a king with a common switch. So to the lapel of the boy's coat the teacher pinned a piece of purple ribbon. When the young prince manifested a disposition to defy authority, the instructor pointed with the end of the rod to the purple ribbon on his coat. This was an appeal to his royal blood.

Not a flower gathers on the limbs of a rose bush but addresses the high and purple nature of everyone who beholds it. In Mexico, where the average of life is so low, the flowers which grow in such profusion are about all that is left to keep the people reminded that they are the children of God, the author of all beauty. The highest evidence of the remaining worth of the Mexican people is found in the fact that

they love flowers with a deep and unfailing passion.

IV.

Beauty is to feed enthusiasm. Tones and colors are to be used to jostle the elements of mind, and will, and emotion into harmony with the high and holy life of our Father who art in Heaven. Beauty is to nerve the soldier for the battle, the martyr for the stake, and the hero for his work. There is a height of development to which the human spirit aspires, that the logical understanding is unable to reach. Here, then, where truth in logical form fails, beauty comes, and helps the human spirit to disentangle itself from the sphere of contradictions and antagonisms.

Truth and right command the spirit by an external necessity; beauty moves it by an internal necessity and starts it to vibrating in the very centers of its being, in consonance with itself. Beauty lifts it to a

pinnacle where the horizon quadrates with its irrepressible longings; and where the whole of life is rounded into an orb from which all strife is eliminated, and all discord extracted. Men seek artificial stimulants and narcotics, because of the abiding conviction they have, that their lives were keyed to some ideal realm of unity and freedom.

What intoxicants do to the detriment of the spirit, beauty accomplishes to its health and vigor. It is carried by beauty into no land of vague dream, and unreal delirium, but into a radiant region where the environing conditions exactly match its undying hopes.

LOVE.

"There are indeed men whose souls are like the sea. Those billows that ebb and flood, that inexorable going and coming, that noise of all the winds, that blackness and that translucency, that vegetation peculiar to the deep, that democracy of clouds in full hurricane, those eagles flecked with foam, those wonderful star-risings reflected in mysterious agitation by millions of luminous wavetops, confused heads of the multitudinous sea—the errant lightnings, which seem to watch ; those prodigious sobbings, those half-seen monsters, those nights of darkness broken by howlings, those furies, those frenzies, those torments, those rocks, those shipwrecks, those fleets crushing each other ; then that charm, that mildness, those festivals, those gay white sails, those fishing boats, those songs amid the uproar, those shining ports, those mists rising from the shore ; those wraths and those appeasements, that all in one, the unforeseen amid the changeless, the vast marvel of inexhaustibly varied monotony—all this may exist in a mind, and that mind is called genius, and you have Æschylus, you have Isaiah, you have Dante, you have Michael Angelo, you have Shakspere."

CHAPTER VI.

THE PROVISION FOR THE SPIRITUAL NATURE OF MAN.

In speaking of the spiritual nature of man, reference is not had to a side or faculty or power of himself, but to his real, essential life. Man is a spirit. All faculties and powers exist for him as such. The hunger, and the food provided for it, are to serve man as spirit. The social element, and the power provided for it, are to serve him as spirit. The intellect and truth, the will and right, the æsthetic sense and beauty, are all to serve him as spirit. The correlate of man as spirit, on one side of himself, we have seen to be the life of humanity—the correlate of man as spirit, on the other side of himself, is the life of

God. Man's spiritual nature is mediated to him on one side by the family, by the school, by the institutions of the state, by the establishments of trade, by the newspaper, by literature, by art, by history. Man's spiritual nature is mediated to him on the other side by love, embodied in the one Mediator between God and man.

The mud-philosophy of Locke, and Hume, and Mill, and Spencer dissolves spirit, because it dissolves the idea of a mind, an ego, or an external world. If the mind can know nothing but a succession of things in time, if nothing but a constant flow and flux of sensations; of course it cannot know itself, only as a sensation in the perpetual procession of sensations always passing by. But how is it possible for the mind to know a succession of things in time, and a procession of things in space, unless it is itself out of and apart from the succession and the procession. One sensa-

tion, say of the self, in a flow of sensations, could not know itself as a part of such a flow, without knowing itself as related to a before and an after in the process. To know even a procession of sensations, we must have a spirit that stands still and does not pass on with the procession. The spirit, then, must be out of time to know succession, and out of space to know procession, and self-conscious, so as to distinguish itself from the succession and the procession. The human spirit is something in the midst of time, yet passes not with the tides of time. It is to the succession of things ever passing through it, and to the procession of sensations ever passing before it, like some mighty Teneriffe with its peak of Teyde in the midst of the sea, pushing its proud head up 12,000 feet above the sea, and contrasting with its ever changing waves, the immutability of eternity. Man, as a spirit, is after God, the

most universal of all facts. He is illimitable in more ways than space, remaining when all the events of time have passed, and with a nature dipping into the eternal spirit of God. The respect in which man is made in the image of God, is, that he is endowed with self-consciousness, and self-determination. Self-consciousness and self-determination are the universal forms of spiritual activity. Man, as a self-conscious and self-determining spirit, is not independent. He must find his true self beyond himself. He is dependent upon the absolute self-consciousness and self-determination of God. He is the child of God, and as there cannot be an absolute without a relative, he is the relativity of the absolute. God's nature is the ground of man's nature, and in God he is mirrored to himself.

In God man lives and moves and has his being. In finding God, man finds himself.

In the revelation of God is the revelation of man. God is a spirit and man is a spirit; but man, as a relative spirit, comes to himself in God, the absolute spirit; as the life-germ of the acorn comes to itself in the natural conditions of soil and sky which environ it.

I.

As man is essentially spirit, he can never come to unity, only as he comes to it in himself as a spirit. As long as he abandons himself to mere bread, or power, or knowledge, or law, or beauty, there is contradiction. Not in any one of these can he find full-orbed life. These all bring nutriment to him, as a spirit, from the several spheres to which they are variously correlated. But provision is made not only for the sides and faculties of himself, but for the essential nature of himself. We have seen how hunger was met by bread, the needs of the social nature by power, in-

tellect by truth, will by law, and the æsthetic sense by beauty; but here we come to life, and find that love, timeless and illimitable love, alone corresponds to it. But love can only find its embodiment and its expression in life. Therefore, love has taken the form of life to meet the needs of man as a spirit.

We do not propose to discuss this subject dogmatically. The writer believes in dogmatism; but in this work the attempt has been to treat man, and the things provided for him, scientifically. We have taken nothing for granted, and have intended to say nothing but what was warranted by the facts. That man is a spirit, and related to an unseen realm, is attested by the fact that all round this world temples and mosques, and synagogues and churches lift themselves sublimely, or modestly, to the sky. That there is something in man that seeks provision from beyond the range of

sense and sight, no one in his senses can deny. This deep and fundamental and irrepressible need of man's nature finds its correlate in love. Speaking out of the depths of his life, it is an everlasting call for sympathy, for reconciliation, for pardon, for peace. Love gives sympathy, insures reconciliation, grants pardon, and secures peace. But love can only come from the unseen and eternal in the form of life. Let us see how the love expressed in the life and sacrifice and death of Jesus Christ, as the embodiment of divine love, is set over against the spiritual nature of man, as its correlate; as completely as bread is set over against hunger, or the truth against the intellect, or as beauty is set over against the æsthetic sense. We believe this is so in the nature of things, and will finally be taught as truth, as absolute and unfailing as the multiplication table. Men will come to it, after a while, not only as a dogmatic

doctrine taught by the churches, but also as absolute doctrine, taught by the constitution and needs of human nature. The time will come when to doubt this will not simply be to write one's self down as mean, but as mentally unbalanced. If Jesus Christ, as love, is the correlate of the spiritual needs of the human race, then his life is peculiar and unique. It cannot be classed with any other life. It cannot be measured by any rule used to measure other things or other lives. We propose to test this life by a principle said, by scientific men, to have universal application in this time.

II.

The doctrine of the correlation, equivalence, persistence, transmutability and indestructibility of force, or the conservation of energy has had vast influence upon the thought and life of our time. It has fur-

nished a new opening through which to behold the nature of things. It has given to men a new working hypothesis and richer views and conceptions of the universe and its author.

The tremendous advancement made in the material civilization of the present is due more to this than any other scientific doctrine or principle. According to Professor Balfour Stewart, there are eight forms of energy or force. The energy of visible motion, visible energy of position, heat motion, molecular separation, atomic or chemical separation, electrical separation, electricity in motion, and radiant energy. Now taking this earth as a complete whole, containing within itself all these forms of energy, and so isolated from the rest of the universe as to receive nothing from it and to add nothing to it, then the principle of the correlation of forces asserts that the sum of all these forces is constant.

"This does not assert that each is constant in itself, or any other of the forms of force enumerated, for in truth they are always changing about into each other—now some visible energy being changed into heat or electricity, and heat or electricity being changed back again into visible energy; but it only means that the sum of all the energies taken together is constant. There are eight variable quantities, and it is only asserted that their sum is constant, not by any means that they are constant themselves."

For the purpose of elucidating our principle in the realm of nature, we will consider it as it applies to some of the useful forces whose effects we can measure and whose origin we can trace and determine.

There is the force of conserved fuel. Away back in the carboniferous period of the world's history, there grew immense forests, which in succeeding ages were

turned under the earth, and, in the process of the years, were changed into coal and oil and gas. These have been treasured for untold ages in the mountains and in the bowels of the earth. Now they are brought forth by the applied intelligence of man, to turn his wheel, draw his car, cook his food, propel his plow, and to light his home and his street. The force in one ton of coal is capable of accomplishing more work in a few hours than one man could in a lifetime. All this force, as well as that contained in the growing forests of to-day, originated in the sun.

There is the conserved force of food. This is found primarily in the grass, the wheat, the rice, the fruit, which grow in our fields and orchards. The lower animals feed on these, and through the process of digestion and assimilation, they are transmuted into blood and bone and muscle—thus furnishing man, who stands at

the top and the end of the creative process, with a more refined higher form of food. But whether in the shape of grass, rice, wheat, or in the more refined form of animal flesh, these various elements of food are only so much transmuted sunshine. Before they ever adorned the surface of our fields, or moved in the lowing herd over the meadow, they were held in solution in the sunshine. The food, the fuel, and the animal life of our earth are all traceable to the sun.

There is the conserved force of flowing water. This turns the wheel, spins the thread, gins the cotton, weaves the cloth, and grinds the corn. All the force that water possesses for the performance of work, comes from the sun. The warm rays of the sun, coming down on southern seas and rivers, causes the waters thereof to evaporate, and then it is carried on the wings of north-bound winds to a colder

clime. There the diffused waters gather themselves into clouds and fall in rain to flow down the rivers, thus exchanging their energy of position, which they have obtained from the sun, for the actual energy of the turning wheel.

There is also the conserved force of moving winds. By the aid of this ships spread their sails, and pass from continent to continent with the products of the earth. Again all the force the winds possess for the accomplishment of work comes from the sun. The rays of the sun come down with great intensity upon certain parts of the earth and heat the atmosphere. Into these heated places come the winds from colder regions. Thus currents and counter-currents are created. By putting the wheel of the windmill into these currents this force is converted into the ground wheat and the drawn water. Thus all the different forms of force dis-

played in the growing forests, the waving harvest fields, the flying birds, the lowing herds, the rushing railway train, the whir of the spindle, the ring of the hammer, and the pulsating blood come directly from the sun. The force, too, seen in all these physical, vegetable, animal, commercial realms, is the exact equivalent of what was poured into them from the sun. The earth contains no other force capital than what was paid over to it by the sun. It has issued no currency of its own, not even enough to run a watch, or to send the blood once around the body, or even to transport a piece of bread to a starving man. All the force our earth possesses is borrowed, and if we were to cease to borrow, we would be bankrupt in a single day. We are to remember, too, that by so much force as the sun has parted with to our earth, and to other worlds which look to it for supplies, by so much has its own force

been decreased. If we knew how much force the sun had in the beginning, and would subtract from this amount all that it has given away to the present time, we might be able to form some estimate of its assets to-day.

We know not what the sun's resources are. We know not by what methods it has been replenishing its supplies of light and heat for ages past; whether by chemical combination, meteoric impact, or condensation; we only know by so much as it has in the ages past parted with, by so much less force it has to-day. That it has been able to supply our world and others like it, however, with heat and light and physical life for ages, is not at all strange when we remember what an immense ball of fire the sun is. It has a diameter of a million miles, in round numbers. Storms, which travel across our world at the rate of sixty miles an hour, would move across

the surface of the sun at the rate of twenty thousand miles an hour. The flames of a burning forest, which on our world would rise one hundred feet in the air, on the sun would rise to the height of two hundred thousand miles. The sun, too, has enough force on hand to supply our earth and others with heat for untold ages yet to come, but unless its supply is replenished, the time will come when it will be bankrupt and nothing but a burnt out char in the heavens. This is so, because the sun is the center of that great natural realm, the universal law of which is the law of exclusiveness.

In accordance with this law what the sun has in the way of force the other planets do not have, and what other planets obtain from the sun that body has forever lost. This is only another name for the law of the correlation of forces. This law applies not only to the force of the sun, but to all forces on this earth which come

from that body. What one tree gathers into itself is at the expense of the general fund of force which goes to make trees. What one bird takes into his body is at the expense of all force which goes to make birds. What one man takes into his physical frame is at the expense of the general fund of force which goes to make human bodies. Whatever amount of force is contained in the cloud, in conserved water to turn the wheel, or in conserved electricity to carry the message, is at the expense of the general fund of force.

According to the doctrine of the correlation of forces, the rising up of force in one place involves the subsidence of force in another place. The amount rising up, too, is the exact equivalent of the amount subsiding. When a rock falls from a church steeple the earth rises as much to meet the rock, in proportion to its mass, as the rock falls to meet the earth, in proportion to its

mass. When a man shoots a rifle ball from a gun, as much force goes back against his shoulder as goes out through the muzzle of the gun. What the gun lacks in velocity it makes up in mass, and what the ball lacks in mass it makes up in velocity. When a pine tree is cut down and split into small pieces and put into an engine, just the same amount of heat is gathered from it that was garnered from the sun in the fifty years of its growth. This heat is also converted into an equivalent of steam, and this steam into an equivalent amount of mechanical motion. The sunshine, the pine tree, the heat, the steam, the mechanical motion, are only different forms of the same thing. Scientists of the materialistic school claim that this law holds good not only in the realm of the natural world, but in the mental and moral, as well. Prof. Thomas H. Huxley said, in a celebrated address in this country once,

that a speech was only so much transmuted mutton. According to Prof. Alexander Bain, there are five chief powers, or forces in nature: one mechanical or molar, the momentum of moving matter; the others, molecular, are embodied in the molecules, also supposed in motion—these are light, heat, chemical force, electricity. One member of vital energies, the nerve force, allied to electricity, fully deserves to rank in the correlation. According to this same distinguished authority, mind is only a refined and sublimated form of physical force. In this view the great poems, paintings, and literature of the world would be only so much transmuted sunshine—a higher form of the same force we see manifested in the flying railway train. In the one case the solidified sunshine contained in the coal is transmuted through the furnace of the engine into mechanical motion; in the other, the heat contained in

food is transmuted through the human brain into literature and art. Perhaps it might not be at wide variance from the truth to assume that the force, mental or otherwise, expended by men who spend their lives under the dominion of the natural law of exclusiveness, may be accounted for in accordance with the doctrine of the correlation of forces. Even mind, when earthly and low, is subject to the bearing of the law of sin and death, which is the scriptural name for the law of exclusiveness.

III.

It might be plausibly contended that the religious movement of the prophet Mohammed could be accounted for in accordance with the doctrine of the correlation of forces. It is to be remembered that the personality of Mohammed is no more the equivalent of the vast movement which has

existed and exists to-day under his name, than the acorn is the quantitative equivalent of the immense oak tree which has grown from it. The acorn, plus all the oxygen, carbon, hydrogen, nitrogen, and other forces of sky and earth which it caught and organized, is the equivalent of the oak tree. The soil and the sky contain oaks in solution. Through acorns these are precipitated into trees.

The mental, political, and social atmosphere of Turkey contained the Mohammedan movement in solution before Mohammed was born. Through him it was precipitated into Koran, mosque, prayer, and worship.

Mohammed relied for success upon the methods with which men ordinarily succeed. He appealed to men's love of fame, of pleasure, of conquest, of power, of riches. He simply organized the latent aspirations, and hopes, and fears of his

countrymen into a great kingdom, essentially secular and sensual.

In accordance with the principle of the correlation of forces, it might be possible to account for the success of Buddha, Confucius, Cæsar, and Bonaparte. What we wish now, is to apply this doctrine, which the materialists claim is capable of measuring everything, from an atom to Milton's "Paradise Lost," to the life and work of Christ. Granting, as we must, that all physical force may be estimated by it, and even that the work and thought of men, in so far as they live under the natural law of selfishness or exclusiveness, may be estimated by it.

What we desire to inquire is, if the life and work of Christ form no exception to its operation, as ordinarily regarded. Can we, in accordance with this principle, account for the life and influence of Christ on the assumption that he was only a man?

Has no more force issued from the person of Christ than subsided when only a man named Jesus was crucified?

We have seen how the forms of physical force in the shape of fuel, food, moving waters, and winds may be traced directly to the sun. Let us also consider some of the forms of spiritual force which are traceable directly to the life of Christ, and inquire if they may be accounted for as the force which comes from the sun may be, by the principle of the convertibility of force.

IV.

There is the conserved spiritual force of Christian literature. This is stored up in the Bibles of the world, in commentaries upon its text, in expositions of its principles, in books illustrating its meaning. If all the Bibles of the world, books written about the Bible—in favor of it or against it—and all the books which have

been inspired by some truth or precept taught in the Bible, and all the books which owe their existence directly or indirectly to the Bible, were burned up, Christendom would be well-nigh without literature. All Bibles and all books and literature which have grown out of the Bible owe their existence directly to Christ. They have come as straight from him as the coal in the mountain has come from the sun. Much force has been expended in the writing of all these books and in printing them, binding them, circulating them. They represent millions of dollars, ages of painful, patient thought. Into them a marvelous amount of force has lifted itself—physical force, money force, thought force. We are to find its equivalent. All the force that has arisen in Christian literature has subsided at some point, and the amount that subsided is the exact equivalent of that which has arisen. It must be remembered,

too, that distinctly Christian literature has not made its way in the world, as have the writings of Homer and Plato, by their affinity with man's fancy. The wonderful interest which has ever centered around the Bible is totally different in kind and degree from that which centers around the works of Shakspere. Whatever there is of literary merit, of philosophic thought, or of poetic depth in the Bible is incidental.

There is the conserved spiritual force of Christian art. The masterpieces in painting, sculpture, music, poetry, and architecture are Christian. The inspiration which produced Milton's "Paradise Lost," Handel's "Messiah," Powers' "Eve," and St. Peter's at Rome, has all come from Christ. In the conception and production of these an immense amount of the most subtle, refined force has been expended.

There is the conserved force of Christian

money. This has taken the form of church buildings, buildings for education, for orphans, for the sick, for the wretched and the poor. There is not a great city in the world to-day without a Christian church edifice. They are the expressions of a great force, of which we are seeking to find the equivalent. They owe their existence directly to the person of Christ. The millions of money which have been spent in their erection have been because of love to him. They are as directly related to him as the oak tree is to the sun. If all these churches were burned down to-day, men would begin at once the erection of better ones to take their places. The conserved force of Christian money, then, which tends to lift itself into church edifices, is not exhausted in those which already stand upon the earth; but just as much as has lifted itself into brick and marble, and window, and dome, and

pinnacle is ready to take the same forms if the necessity for them were laid upon the Christian world.

There is the conserved force of Christian home life. The force here referred to is not manifest in the life itself, but in the form which family life has taken in the Christian world. There is hardly a home in Christendom to-day, but has been formed directly or indirectly with reference to Christ. Into those places where character is formed, where revolutions are started, where Wesleys and Gladstones are developed, where eternal issues pend, Christ has come quietly and silently to regulate, to dominate and control. To thus influence, regulate, and vitally touch homes, to thus determine their form, appointment, and character, requires a great deal of force.

There is the conserved force implied in the inception and perpetuation of the

Christian Calendar. Infidels, materialists, and atheists, in dating their letters, pay tribute to the character of Christ in the fact that they recognize he has ushered in a new era. Christ has claimed and held through nearly two thousand years one day out of every week to be devoted to his service. The day upon which he was born is celebrated in the hearts of men and in the arts of men. To change the world's calendar, to inaugurate and make permanent a new date, to impel the world to set apart a day for his worship, to furnish the world with new festivals and holidays, has required, certainly, a vast amount of force. This we are to trace and determine, and we are also to find its equivalent.

There is the conserved Christian force implied in the fact that Christ has won the hearts of men. To win the disinterested love of one man takes much force, more

than most men have. To win the love of a state takes more. But to win and to hold, through the perturbations and revolutions of kingdoms and republics, the undying love of the best and purest men on earth requires an infinite amount of force. This point in Christ's character greatly impressed the first Napoleon. Said he, "I know men. Christ is not a man. I have seen the time when I could inspire thousands to die for me, but it took the inspiration of my presence and the power of my word. Since I am away from men, a prisoner on Helena, no one will die for me. Christ, on the other hand, has been away from the world nearly two thousand years, and yet there are millions who would die for him. I tell you, Christ is not a man. I know men."

V.

It would be impossible to recount all the institutions, books, civilizations, laws, dis-

coveries, inventions, homes and hearts, into which the force of Christ's life has for the past nineteen hundred years been lifting itself. As the sun expresses itself in the meadow, and lifts itself into the trees of the forests, so Christ has been embodying himself in the institutions, homes, and thoughts of men. The scientists say all force can be accounted for. When force has risen up at one point it has subsided at another: the amount rising up being the exact equivalent of that subsiding. Upon this principle we are seeking to account for all this force that, coming from Christ, has expressed itself in the domestic, social, political, and ecclesiastical institutions of men. More has risen than can be computed by human arithmetic, or compassed by human imagination, or comprehended by human thought. Where did it come from? Where did it subside? At what point did it disappear to rise again in such overwhelming

volume, and such sweeping and far-reaching influence? We go back through eighteen hundred years. We are standing in Jerusalem. We hear conflicting reports of a strange, daring young man. At length he is pointed out to us. There is nothing remarkable about his appearance. He is a Jew. He was born among the poor. He is not noted for culture. He has no social position. He has no money. He has no political power or prestige. He has no army at his command. He has no philosophical system. He is connected with no academy. He is only thirty-three years old. His words are contained in no books. They are simply in the memory of his disciples. He is misunderstood. His own disciples do not know what to make of him. Finally he is arrested, and tried, and condemned, and crucified. He dies between two thieves, scorned, scoffed, buffeted, and friendless. Keep in mind the principle we

are considering. All force can be measured. No more force rises up than subsides. Action and reaction are equal. We are seeking to account, in accordance with this principle, for the vast amount of force Christ has poured into the institutions and thoughts of humanity. Is this young man's life, seemingly so insignificant and weak, the exact equivalent of all the churches, schools, colleges, arts, literature, homes, governments, sacrifice, heroism, good works, martyrdom, patience, love, and hope that have by general consent resulted from his existence in the world? If so, was he only a man? Multiply thirty-three years by poverty, toil, contempt, sorrow, and crucifixion, and you have one product. Multiply nineteen hundred years by millions of churches, schools, and homes; by millions of books, paintings, and poems; by social position, wealth, and power; by success, triumph, and conquest; by love, mercy, and

truth; by a hold upon humanity unequaled, and by an influence on home and thought unrivaled, and you have another product. The question is: does one of these products seem to be the equivalent of the other? Does not the outcome surpass by an infinite degree the income? Is not the evolution out of all proportion to the involution? Has not a great deal more force risen up than seemingly subsided? Is there not much more power seemingly on this side the Cross than there was on the other? Manifestly and clearly Christ's life and work cannot be accounted for by the principle of the correlation of forces.

Mohammed's success and disciples we can understand. He succeeded by the ordinary methods by which men succeed. He appealed to men's love of fame, conquest, wealth, power, pleasure. He offered men, as a reward for their fealty to him, a great earthly kingdom, and such a heaven beyond

the grave as would regale the senses, please the fancy, and gratify the appetites. He simply organized and applied the latent earthly forces already existing in his countrymen. His success is in line with that of Cæsar and Bonaparte. The kingdom which he proposed to establish was merely an earthly, sensual kingdom. His methods were carnal, the motives to which he appealed were sensual, and the hopes which he inspired were carnal. Christ, on the other hand, condemned men's love of conquest, power, fame, riches, and pleasure. He made the conditions of discipleship to consist in the denial of self and in the relinquishment of all earthly hopes, gratifications, and prospects. "If you find your life in my kingdom," said he, "you must lose it in this." He proposed to build up a kingdom as wide as the world, and as lasting as eternity, without adopting a single method or utilizing any of the means

ordinarily relied on for success. Not only did he propose a new kingdom, but to populate it with new men, motives, hopes, conceptions, and opinions. Hence, to come into his kingdom, men were to be made over. They were to die to self, to the world, to pleasure. So Christ's work and influence in the world not only forms an exception to the principle of the correlation of forces, but here we have an unparalleled amount of force rising up when, to all human appearances, none subsided at all.

VI.

A poor young carpenter dies. He goes down in ignominy. Amid the jeers and contempt of the multitude, he goes down into the grave. But from that moment, commotion begins. Forgiveness of sin in the name of Christ is preached; disciples are won; books are written; civilizations are touched; movements are inaugurated;

persecutions, bloody and relentless, are waged. The fires of hate are kindled; storms from all round the social, political, and religious sky gather, and howl, and empty their fury upon the new movement. Nothing impedes it; fire cannot hinder it; persecution intensifies it; death does not alarm it. Now, we submit, does not such a movement, starting from such a source, and moving out with such vigor, and becoming intenser and deeper as it is extended, form a remarkable and singular exception to the principle we are considering? Is there any rule among men by which it may be estimated and classified and labeled? Can any human, or logical, or philosophical formula or principle measure the multiform and widely diversified facts in this case? Does it not form an exception to all rules and human methods of measurements? Do we not augment the difficulties of accounting for the work of Christ

by minifying him, and calling him a mere man? Is not the easier way to account for Christ's work, to accord to him all that he claims for himself and all that his disciples claimed for him. He said, "All power is given to me in heaven and in earth." If we accept this as true, we can account for his work. But in this view, we will see that his life was divine and one with the Father of us all. Then we will see that he was the Son of God, the Word made flesh, the incarnation of the divine mind and wisdom and power. It is impossible to account for the life and work of Christ by the principles with which physical force and merely human force and thought are measured. The sun is the center of the system of nature, a system destined to end. Any system, the center of which is gradually losing its force, cannot last. Christ is the center of a spiritual system totally different from the

system of nature. By all the force the sun parts with to the worlds about it, by so much less has it. It is gradually losing itself, to find itself no more forever. Christ is pouring his force into the system of which he is the center, but by such a process he is not losing his force, but increasing it. By losing himself he finds himself. The universal law of the system of which he is the center, is the law of communion. The force he gives away comes back to him augmented by the personality of all who partake of it. Instead of becoming poorer by giving, he becomes richer. This great truth St. Paul saw when he said: "All things are yours, whether Paul, or Apollos, or Cephas, or the world, or life, or death, or things present, or things to come, all are yours, and ye are Christ's; and Christ is God's."

VII.

One life has appeared among men, then, that was all love. Jesus Christ is the only original, absolutely unselfish life that has been lived on earth. The saints have found the secret, and strength, and inspiration of their unselfishness and love in him. The love which matches and meets the illimitable nature of the human spirit is embodied in a life that cannot be measured by the ordinary rules and standards of men. The object of which hunger is the subject, is bread; the object of which intellect is the subject, is truth; the object of which will is the subject, is law; the object of which the æsthetic sense is the subject, is beauty; the object of which the spiritual nature is the subject, is Jesus Christ. The spirit of man which has for its correlate in time, the race, has for its correlate in eternity, the life of one

in which is summed up all power, all truth, all law, all beauty, and all love. As the embodiment of love the human spirit finds in Christ the climate and the conditions exactly adapted to its own realization. The plan and pattern, the invisible framework and ideal of every man's life is Christian. To be an oak is to be a perfect acorn, to be an apple is to be a complete flower, to be a Christian is be a complete man.

IMMORTALITY.

" How does the rivulet find its way ?
How does the floweret know its day
And open its cup to catch the ray ?

" I see the germ to the sunlight reach,
And the nestling knows the old bird's speech.
I do not know who is there to teach.

" I see the hare through the thicket glide,
And the stars through the trackless spaces ride.
I do not see who is there to guide.

" He is eyes for all, who is eyes for the mole,
See motion goes to the rightful goal.
O God ! I can trust for the human soul."

CHAPTER VII.

THE PERMANENCE OF THE COMPLETED LIFE OF MAN.

Back of the movement which began in creation and culminated in man, we posited the mind of a self-conscious, self-determining, self-active, personal God. Necessity was upon us to assume a first principle of some kind, and it seemed proper to have one large enough to account for the facts we were about to consider. The first principle Thales set up was water. In water he saw the origin of all and the end of all. But all that came out of water must, in the end, find its death in water. With nothing but a vast ocean to start with, we shall find, at the conclusion, nothing more articulate and rational than an infinite expanse of water to end with.

Herbert Spencer, "the heir of all the ages in the foremost files of time," took as the starting point of his philosophy the unknowable. In the selection of a first principle, however, we think Thales, though the first philosopher who ever lived, had the advantage of him.

Water is a definite and positive somewhat; the unknowable is an indefinite and inarticulate vacuity. With water for a first principle, the prospect is certain destruction in a general deluge. With the unknowable for a first principle, the prospect is sure imbecility in universal ignorance. It is better to be drowned in water than to have the light of intelligence put out in everlasting night. Mr. Spencer's unknowable was a convenient receptacle into which to dump difficulties and troublesome problems; but, as a working hypothesis, it was not sufficient even to build the universe Mr. Spencer saw. In the process of con-

structing his system, Mr. Spencer gave to his unknowable nearly all the attributes which theologians give to a personal God. As we have already seen, when Mr. Spencer got through with drawing from his unknowable all that he had to have to give his system the order and show of reason, it was found that the unknowable part of the unknowable had about been scattered in the light of knowledge. For this same unknowable was found to have Being, Power, Activity, Causal Energy, and Omnipresence for attributes. Nothing more can come out of a first principle than what is contained in it. Out of water, nothing but water comes, and out of the unknowable, nothing but the unknowable comes. One can posit an acorn, under certain conditions of soil and sky, and get an oak; but the germ of the oak must be in the acorn, and the nutriment of the oak must be in the conditions before any oak can come out.

It is the old truism, that "out of nothing, nothing comes." No one ever attempts to account for anything without a first principle. The test of the reality and value of a first principle will be determined solely by its capacity to account for the facts which come out of it. It is because the unknowable fails to account for the facts of nature, and for self-consciousness, self-determination, and self-activity in man, who stands as the complete consummation and realization of nature, that it is not accepted as an adequate first principle.

Matthew Arnold, in order to escape the objections which he had to taking a self-conscious, self-determining, personal God for a first principle, substituted "The Stream of Tendency, not ourselves, that makes for righteousness." But this sentence, when analyzed, reveals the fact that Matthew Arnold's Stream has about the same essential elements the theologian sup-

poses to reside in God. A stream has a source, a direction, and an end. Here, then, we have cause, means, and ultimate object. It is also said that the stream makes for something; here is self-determination. It is said to make for righteousness; here is the attribute of Justice, and justice can only be predicated of a person.

Given nature, with its elements, laws, and unity, and man as the being in whom the whole of nature is summed up, with self-consciousness, self-determination, and self-activity; the only first principle sufficient to account for the facts is a self-conscious, self-determining, self-active personal God. It is only such a first principle that is large enough to account for the number, and order, and drift, and collocations of the facts; and to such a first principle the number, and order, and drift, and collocations of the facts may be traced.

If we see red and violet and blue colors

appearing in the carpet on one side of the loom, we are warranted in assuming that red and violet and blue threads are entering the carpet on the other side of the loom. Nature is a marvelous loom. At first there are simple elements, then there are compounds, then there are plants, then there are animals. At last all the elements, as so many strands, with their manifold hues and variegated colors, appear in the life of man. Man is the harbor where all the freight, started on its stormy course at creation, comes to shore. Its matter takes majestic form in his body, its power lends itself as wind to his sail, as heat to his engine, as light to his street: its truth is arranged by the intellect into literature and science: its law is formulated into statutes, enactments, and constitutions: its beauty is built into oratorios and spread in radiant visions: its love is accepted and turned into tenderness, and

sacrifice, and hope. Infinite personality at the beginning, self-conscious, self-determining, and self-active. Finite personality at the conclusion, self-conscious, self-determining, and self-active.

If you call the process evolution, then no more has been evolved than was involved. If you prefer direct creation, then nothing is seen in the creature that was not built into him by the Creator. Either way, if a self-conscious, self-determining, and self-active man appears on one side of nature, a self-conscious, self-determining, and self-active personal God is, we may know, on the other.

I.

The importance of a correct first principle, and of a right idea of the nature of that first principle, cannot be urged too strongly. In the right solution of the question we are considering, everything

depends on it. If we start with water, as Thales did, we will be forced to conclude that individual lives, like bubbles, will eventually fall back and mingle with the waves of the sea.

If we start with the unknowable, as Spencer did, we shall be led to see that human spirits will lose themselves at death, as candles lose their light when the wicks are consumed.

It is not left us, however, arbitrarily to assume such a first principle as comports with the particular theory of life it is our purpose to establish. The first principle that corresponds to reality is already implicit in the facts, the origin, and purpose, and end of which we wish to know. The law of gravity is implicit in falling bodies, and in the revolving stars. The sunbeam is implicit in the growing tree. All that happens when one posits a first principle that is not implicit in the

facts he is considering, is that his first principle will fail to account for the facts. Matthew Arnold had a perfect right to assume as a first principle, "The Stream of Tendency, not ourselves, that makes for righteousness." This looked poetic and impersonal, and in his esteem served him as a working hypothesis.

It never seemed to occur to him that his principle implied the same elements and attributes the theologians regarded as uniting in God; the elements and attributes he was so anxious to get rid of. Herbert Spencer, with a theory to work out, and a particular system to buttress and bolster, devised and adopted a first principle that seemed to promise most to his peculiar views. This he had a right to do. But he had no right to take as a first principle the unknowable, with which to destroy the Christian's God; and just as soon as he had accomplished this to his

entire satisfaction, to turn deliberately and take nearly every attribute of the Christian's God to bestow upon his unknowable. It is hardly to be supposed that Mr. Spencer, with malice aforethought planned the death of God in order to steal his attributes. The more charitable view is to suppose that at the outset his intention was to erect an absolutely new philosophic edifice, upon a new and original foundation. To do this, it was necessary to clear the ground of everything in sight. So in a high moment of philosophic self-confidence, he determined on the obliteration of all previous and time-honored first principles, that he might posit one of his own making and to his own liking.

This was the destructive stage of his mental movement, and it did not occur to him that many of the elements he was clearing away in such wholesale fashion

would be necessary to carry up his new philosophic temple. When he got through with the period of preparation, he had nothing to start with but a plain, simple, empty, unknowable. But it soon became evident that the unknowable must have some content, in order to support a decent and orderly structure. At this point he took the attributes of the Christian's God, Being, Power, Activity, Causal Energy, Omnipresence, and filled up his empty unknowable with them. Then he proceeded with his work.

II.

In starting with a self-conscious, self-determining and personal God, then, as a first principle that accommodates and insures the immortality of the individual spirit, we are only beginning with what is implicit in the facts of nature and human life. Let it be clearly apprehended that

the ground of the self-conscious, self-determining, personal God is thought. That the fundamental and first thing in this universe is mind. That the being of God is secondary to the mind, or thought of God. God has being, because he has thought, and not thought, because he has being. The trouble with the pantheistic system of Spinoza was that he looked upon God, first as infinite substance or being, while thought was only one of the modes of this being, and extension was the other. The root of all doubt and skepticism is to be traced to a confused notion of the nature of God. Many speak of God as the Supreme Being, and advertise by their language that in their esteem God is diffused nebulosity, or universally extended externality. There never was a skeptic in the world who had come to the rational and tenable position, that God is primarily, and fundamentally, and essentially thought.

We may properly speak of his being, his wisdom, his justice, his truth, his love; but these are different determinations of his thought. God's being is the externality of his thought. His wisdom is his thought devising means to ends. His justice is his thought balancing and regulating. His truth is his thought in realization. His love is his thought in sacrifice. "In the beginning was the Word." A word is an expressed thought. "The Word was with God." The realized thought or word was with God, the Eternal Thinker, or Thought. "God said, Let there be light, and there was light." Light was thus the expression of thought. Nearly all materialism and pantheism look upon things as an emanation from something. Vapor emanates from the surface of a river, and is only the river in diffusion. But the universe does not emanate from God; it is the direct creation and

expression of his thought. Potentially the universe was always in the thought of God.

III.

We have dwelt at length on the self-consciousness and self-determination of God, as these unite in him as an absolute personality, for the reason that the immortality of the human spirit finds its condition and its security here. If God is a person, and self-conscious, self-determining, and self-active, man is immortal, for in him the elements which constitute the essential nature of God appear. Man is a person and a spirit, made in the likeness and image of God. He is, therefore, as imperishable and indestructible as God is. He has thought and is therefore self-conscious; he has a will, and is therefore self-determining; he has power, and is therefore self-active; he maintains his identity through change, and is therefore a person.

But the finite person finds his life through the infinite Person. He finds his knowledge by partaking of truth, the realized thought of God; he finds his freedom by the observance of law, the expressed will of God; he finds his peace by partaking of the life that was in Christ, the manifested love of God. As the fundamental and prior thing in the being of God is thought, so the fundamental and prior thing in the being of man is thought. His progress in the practical matters of life will be in proportion to his thought. His political status will be in proportion to his thought; his religious attainment will be in proportion to his thought. Schleiermacher said "Feeling is the source of religion—a feeling of dependence." But one cannot have a feeling of dependence without having the thought of dependence. One cannot feel that he depends unless he thinks of himself as de-

pendent. Matthew Arnold said that religion was morality touched by emotion. But there cannot be morality without the thought of some rule by which conduct ought to be guided. Even the African savage, who worships a snake, thinks there is something in the snake entitled to his adoration. Thought is the clearest self-explication of the human spirit. In thought it comes to itself and knows itself. Take thought out of the spirit of man, and you take out its essential nature. Its immortality, even were it possible, would then not be worth contending for. One had as well be blotted out, as to lose the only element of his spirit by which he is able to recognize himself as such. Looking upon thought as the center and kernel of the human spirit, we see that to deny the immortality of the human spirit is to assume that thought is destructible; and this is a flat contradiction, for destruction

has no meaning, except in relation to thought. It is of the very nature of thought to be eternal. No thought ever dies, or can die. All the determinations of God's thought are eternal. The mind of God has within it all determinations of thought; those past, those present, and those to come. Some of these determinations of the divine thought have taken the form of objects in the inorganic world, some have taken the form of objects in the vegetable kingdom, and some have taken the form of objects in the animal kingdom. The determinations of thought, of which inorganic things, trees, and animals were the expressions, are all eternal.

It is of the nature of the things in which the determinations of thought took form to change and pass away. But the ideal patterns, of which they were only the temporary forms, are held in the mind of God forever. The house which expresses

the architect's ideal may be blown away, or burned up, but the ideal in the thought of the architect cannot be blown away or burned up. Now in man the determination of God's thought is not expressed in a thing, but in a thought. Man, as God's child, inherits, or comes through creation into the possession of thought, of mind, so that he is able to set up thinking—in his own behalf, and by the self-determining, self-conscious, and self-active power of his own mind. God as thought is his own object and his own subject, and man as thought is his own object and his own subject. God has set him up to housekeeping in the republic of thought.

In the changes which take place in material objects, there is preservation of the species, but the loss of the individual. The object is an element and not a self. When it changes, it is by something external to itself, and in changing, realizes its

nature. It is indifferent to change, as there is no central self that retains its essential identity in the midst of all change. The tree belongs to a higher order of existence than a rock. It is the expression of unconscious life. The animal belongs to a still higher plane than the tree. Besides appropriating food from its environment, as does the tree, it takes in the images of things, and lives a low order of sentient life. But in order that animals may take in the images of things through the senses, the things must be present before them. When the thing is gone, the image fades. The objects which stand around man in his environment pass into his consciousness through the senses. But when the environment changes and the objects are taken away, the impressions made by the objects remain. In this way man re-creates the universe for his own thought. The gurgling of brooks, the murmur of the sea, the

sighing of the winds, the cooing of doves, he hears just as the animal does. But away from brooks, and seas, and winds, and doves, Beethoven throws into one of his symphonies all the notes that were ever on sea or land. He has within him the same kind of mind that expressed itself in all the notes of music, and he not only hears these notes, but he re-combines and re-organizes them in his great compositions.

IV.

The spirit of man is simple. It is an ultimate and indivisible unity. Death divides, breaks up, and disintegrates. The nature of the human spirit is such, however, that it cannot be divided, broken up, or disintegrated. We see it maintain its identity through the storms and mutations of eighty years. All things change about it. The very body that constitutes its temporary abiding place is torn down and

rebuilt many times in the course of a long life. It advances in knowledge and experience; grows larger and richer in hope and love, but all its accumulations of thought and increasing wealth of life are stored in the same self-conscious, self-determining, personal spirit. In the evening of life the old man sits in the midst of his grandchildren and recounts the scenes of his boyhood days. All the waves of time contained within the sweep of three score years and ten have left their labels of drift and storm on the shores of his life. But they have not worn, or wasted, or altered his spirit.

A rock wears away, or is crumbled to dust, when it is a rock no longer. A tree is cut down and split into cord wood and burned in the engine, and it is a tree no longer. In the furnace it is turned back into its original elements. In the fire it is altered or othered. The other of a tree is

oxygen, hydrogen, etc. The bird in the thicket is shot by the heartless sportsman. It falls to the ground and its little heart ceases to beat. Soon its body is changed back into earth and air. The other of a bird is not a bird, but the particles which were organized under the process of natural law to form its body. The images which fell on its vision in the grove, faded away when the objects which caused them were removed. The sounds which came to its ears from here and there in the forest passed from its sense when the air that caused them ceased to vibrate. In the bird there was no inner self, abiding, self-conscious, determining, and active, that was capable of grasping and holding and recreating the visions and the notes which came to it. It may have had a sort of sentient consciousness, but it was not much above the consciousness of the sea, which holds the images of the stars in its dark

blue waves, as long as they stand above it.

By comparing man with the classes of individuals below him, we may see the respects in which he rises infinitely above them. And we may see, too, by this comparison, that immortality is not something to which man is to come beyond death, but something that he has already in the very constitution of the personal spirit. The same may be said of man's body, that is said of the bodies of trees and birds, its other is the original elements which compose it. The life in a tree cannot other itself, because it is not conscious. The life in a bird cannot other itself because its consciousness is not self-consciousness. But in man's body there resides a spirit that can other itself. Man, as a personal spirit, can project himself out of himself, and reason with himself and commune with himself. The self he projects out of himself is another self, but not

a different self. The other of man's spirit, then, is not something else, but it is the same spirit. Man is subject and object, active and passive, determiner and determined. Man, as subject, may externalize himself, and thus make of himself his own object, and by this self-separation enrich himself and advance within himself. Beethoven, as a thinking subject, objectified his thought in the symphonies, and thus regaled and thrilled his own spirit. By putting his own thought into the form of sound waves, it came back to him in the rain, and storm, and thunder, and sigh, and murmur of music. As a thinking subject Raphael objectified his own thought in the transfiguration, and thus had it come back to him in a vision as immortal as the spirit that created it. Michael Angelo objectified his own thought in the Last Judgment, and by this self-separation of his spirit, advertised its indestructibility. Homer, as

a thinking subject, objectified his thought into the Iliad. This great epic poem has already lived, even on this side of the grave, where the order is change and decay, nearly three thousand years. Are we to conclude that a personal spirit that could deposit itself in numbers never to die, was itself subject to dissolution? This would be to have an effect greater than the cause. The sunbeam may deposit itself in a tree, and thus secure to itself life in embodied form for hundreds of years. But in order that this may be, the sun must send his beams to warm and nourish the tree all the days of its life. The Iliad has lived, however, nearly three thousand years, without the daily ministrations of Homer's spirit. For a bubble on the sea of life to lift itself into imperishable form and then fall back to mingle with the waves and the waters, is to contradict the principle of the correlation of forces, which declares that

action and reaction must always be equal. The expression a spirit makes of itself cannot be more enduring than the spirit itself.

"The ship may sink and I may drink
A hasty death in the bitter sea;
But all that I leave in the ocean grave
May be slipped and spared, and no loss to me.

"What care I, though falls the sky,
And the shriveled earth to a cinder turn?
No fires of doom can ever consume
What never was made nor meant to burn.

"Let go the breath! There is no death
For the living soul, nor loss nor harm.
Nor of the clod is the life of God;
Let it mount, as it will, from form to form."

When a train of cars stops suddenly at the depot, the energy that caused it to fly along the track is not lost, it is only transformed. When a tree is cut down, the energy that expressed itself in its trunk and branches is not lost, it will only take other forms. When a horse dies, the energy of which its life was the expression

is not lost, it is transformed. When a tree or a horse passes from the living world into the world of inorganic things, the exact amount of energy in the body of the living tree or horse takes other forms. The amount on the side of death is equal to the amount on the side of life. If we consider man only as a physical organism, the same may be said of him. The amount transformed into earth and air, will be the equivalent of the organized fund of bone, and sinew, and muscle, turned over to death. If we thus estimate man, however, as we do a tree or a horse, have we taken into account the entire sum of assets that were in his possession during life? What of his thought, affection, and volition? When Kepler died, what became of the intelligence that discovered the "Three Laws," which constitute the arches of the sublime bridge that spans the vast chasm between Ptolemaic and modern astronomy?

When Laplace died, what became of the spirit that solved the problems of the Mécanique Céleste, by the aid of which the irregularities of the heavenly bodies were reduced to order? When Adams died, what became of the massive spirit that built in the depths of his own study the planet Neptune, with no other raw material to work from than the perturbations of Uranus? When Moses died, what became of the affection that expressed itself in the training and civilization of a race? When Jesus Christ died, what became of the love that sacrificed itself for a sinful world?

When we begin to talk about human life, we find all that has made civilization is not physical. In the death of human beings, the energies of thought, and affection, and volition are not represented in the transformations which take place with reference to their bodies. Yet all the energies man has put forth that give any evidence of his

record on the earth are such as come from thought, and affection, and volition. As these energies are not transformed at death, as are the forces of the body, they must continue. For to suppose they ceased at death would be to break the law of the correlation and the conservation of forces. If they are not transformed at death, along with the forces of the body, they must reside in another than the material world, and must not, therefore, be subject to its changes.

V.

The personal spirit, by its very nature, and tendencies, and possibilities, seems to be addressed to another than the tangible, local, and physical realm in which it finds itself while residing in the body. An irrepressible and wide-reaching something in the spirit of each man seems to impel him to triumph over space, and time, and change. In the accumulation of property, he would

own the whole world. A very small portion of land would be adequate to his physical needs. But he would add acre to acre, till his private domain compassed the surface of the whole earth. Alexander, weeping because there was not another world he could get to conquer, advertises the immensity and illimitability of the human spirit. By the aid of instruments by which man has augmented and lengthened his power of vision, he has come upon stars rolling in the immensity of space to the circle of the thirteenth magnitude. He has not been content to look upon the stars in the vast depths of space, but he has photographed them, so as to behold their faces in his study. Back beyond the dim dawn of time, commensurate with the appearance of human life on earth, he has gone, to return with the chemical, physical, and stratigraphical history of the globe. By the aid of steam, he has

made himself a cosmopolite, and through the application of electricity, he has made himself ubiquitous. Must we not posit a spirit correlated to the universal to account for this disposition to compass all things, to know all things, and to be everywhere? The tendency of the human spirit to compass and possess universality is seen, too, by its capacity to create language, in which it embodies all things and through which it expresses its thought of all things. If there had to be separate words for all individual things any but the most limited knowledge would be impossible, and such knowledge alone there would be if man was shut up to atomic sensations for the data of knowledge. But the mind, by its creative, combining power, and its active spontaneous insight, forms words which represent not only individual things, but classes and species of things. Man devises the word *oak*, and lets it stand for all

the oaks in the world. He creates the word *humanity*, and puts into it the whole human race. He coins the word *vegetable*, and uses it to define the whole kingdom of plants. Thus he not only goes over the world and sees it directly, but he produces language manifold and complicated, and elastic enough to accommodate and contain the world, with all that is in it. This makes it possible for him to go round the world and see all its wonders, without leaving the place of his birth.

He not only builds for himself the universe in language, so that he can contemplate its moons, and measure its suns, and sail its oceans, and climb its mountains in the silent precincts of his study, but he avails himself of sound and light, also, to give expression to universal ideas. He takes a few notes, and so combines and mixes them as to be able to touch all the chords of the universal human heart in one

song. Michael Angelo put all the theology of all the books into the Last Judgment.

Throughout the length and breadth of nature, there is economy of faculty and resource until we come to man. The fish has not a gill nor a fin too many, and there is not in the water where he lives any surplus or margin upon which he does not make levies for his life.

The wings and tail and bones of the bird are all necessary to his poise and circle in the sky. The same economy is found in the atmosphere through which the bird flies. It is none too heavy and none too light. But when we come to man, we find that margin and surplus is the rule. He has a surplus of faculty and a surplus of resource, a surplus of endowment and a surplus of environment. He finds it necessary to make levies on hardly any of himself to get along in this world, at least as far as his natural wants are concerned. What

would be the use for a carpenter to have all the tools necessary to build St. Peter's at Rome, if his only work was to put up a tent for a week's camping excursion in the woods? Why have an engine with a million horse power to run a flutter mill?

With the animal there is changing endowment and changing environment. Limitations are clear and distinct within and without. But with man there is infinite environment. Within he has a self-determining spirit, subject and object, bound together in a simple and indissoluble unity. Surrounding this spirit, infinite in structure and capacity, is infinite truth, infinite law, and infinite love. Even Herbert Spencer said "Perfect correspondence would be perfect life. Were there no changes in the environment but such as the organism had adapted changes to meet, and were it never to fail in the efficiency with which it met them, there would be

eternal existence, and eternal knowledge." In the personal spirit and the elements which surround it, we have the two eternal terms of eternal correspondence. A self-determining spirit is essentially, structurally, and constitutionally imperishable. It others itself only through its own act. And the other of itself is itself. It is its own subject and its own object. When it goes out of itself, it is itself that goes out. It is a complete circle, an absolute and indestructible individuation. It is the final expression of God's creative power. Through all the revolutions and mutations of time, this was the destined goal. The destruction of a human spirit would register the death of God. It is the direct expression of the spirit of God, and bears his own likeness and image, and has for the guarantee of its permanence the person of the eternal God himself.

VI.

Rev. Edward White of England, Dr. E. Petavel of France, and Dr. Lyman Abbott of America, have denied what Dr. Abbott is pleased to call facultative immortality. Immortality, in their esteem, is an importation from without. It is the claim of Locke, and Hume, and Mill, and Spencer, that knowledge is an importation from the realm of sensation. Their war was upon the knowing faculties. From the domain of philosophy the conflict has passed up to the plane of religion, and we now have the attack made upon the self-determining spirit. In the sensational philosophy, we have seen all things dissolved. It not only makes it impossible to rationally believe in God, but also in mind, and self, and external world. The sensational philosophy got the object of knowledge by a process that destroyed the subject of knowl-

edge, so this irrational theory of Dr. Lyman Abbot would secure the object of life by the destruction of the subject of life. We know that the raw material of knowledge is found in the objective world, but unless the mind has the inherent combining, active power to take this raw material and organize it into an orderly system, then the individual can never know anything. There being in the mind no master of ceremonies, no director and referee, the tramp and vagabond sensations may wander in and wander out at their sweet will. They would come in with their own opinions and go out with their own opinions. There being no head of the house within, the tramps could have it all their own way.

Knowledge, beginning out of the mind, would have its cause and end out of the mind. Beginning with matter, knowledge could be resolved back into matter.

We believe the life in which the human spirit is to realize its nature fully and harmoniously was embodied in Jesus Christ, who was the word made flesh.

But it is because the spirit of man is essentially indestructible, that it has power to take hold of this life and assimilate it. If it refuses this divine embodiment of life, it brings disorder, and confusion, and everlasting sorrow to itself, but not destruction. The self-determining spirit is in its structure and constitution up to the style of life offered it in the Son of Man and the Son of God. In finding the life that was in Christ, it finds its own life, and enters the path of everlasting progress.

THE END.

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